

BADGER STATE

Smoke Signals

For Radio Amateurs • By Radio Amateurs

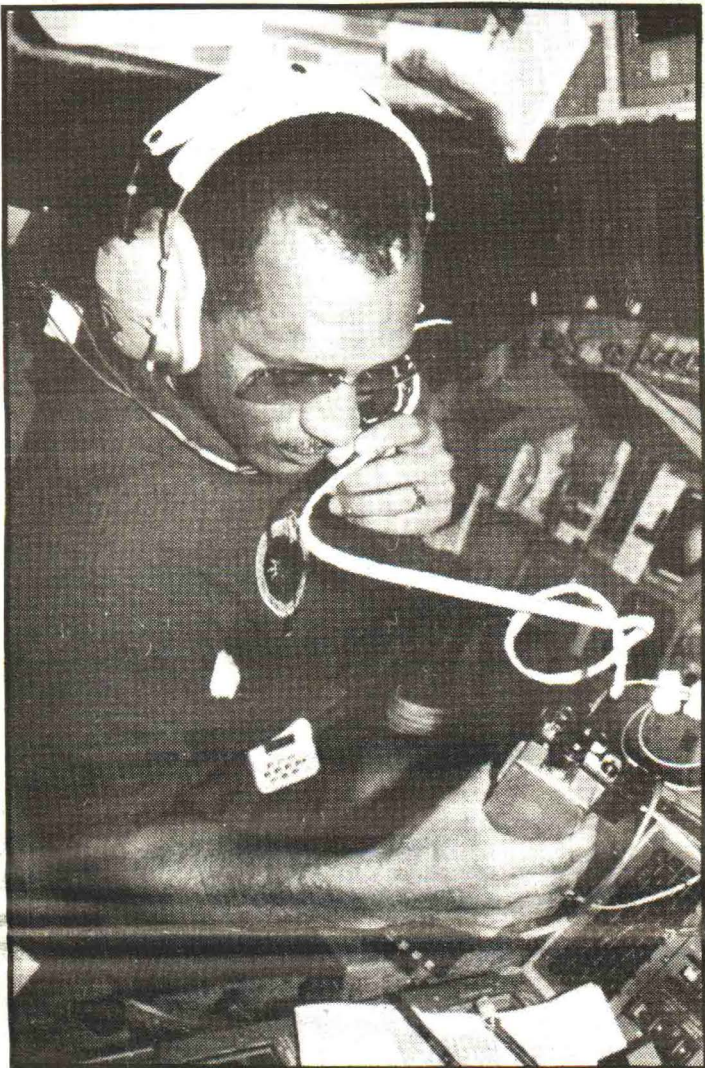
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SAREX '92 Begins

On March 24 at 1314 UTC, the first SAREX mission of 1992 was underway. One day and 12 minutes late, the space shuttle Atlantis carrying the STS-45 crew rose from its launch pad at the Kennedy Space Center in Florida, and headed into earth orbit for a seven day mission which was extended for one day while in flight. A fueling leak had led to the one-day delay.

The primary payload on STS-45 was called ATLAS-1. See the story by Mike Schoenfuss, N9GHZ, on page 10 for more information about Atlantis' scientific mission.

At about nine hours into Mission Day 0, the shuttle-based station began its Amateur Radio operation. All contacts during the flight were made on 2-meter FM, voice only, using SAREX equipment configuration B. This is the now-famous Motorola hand-held radio, more than a dozen fully-charged battery packs, and the deep-dish antenna mounted in an upper window. Battery life was better than expected, with only three batteries used up by mid-day on Mission Day 4.

Please turn to page 13

In the photo, Astronaut Charles F. Bolden, mission commander for the STS-45 shuttle flight, talks to Amateur Radio operators on Earth from the flight deck of Atlantis as part of the ongoing SAREX (Shuttle Amateur Radio Experiment) project. School children, some of whom are licensed radio amateurs, and other amateurs around the world took part in the experiment.

- NASA photo

Kuwait Honors Amateurs for Role During Occupation

The rulers of Kuwait have honored Amateur Radio operators on the first anniversary of that country's liberation from Iraqi occupation forces. Guests of the Kuwaiti government February 22-29 included amateurs from the United States, Guatemala, Sweden, Germany, Egypt, and the Netherlands, as well as Kuwaiti amateurs, all of whom were involved in clandestine communications from Kuwait during the occupation.

The communications, conducted almost entirely on AMTOR, a digital mode of amateur operation, included reports sent out of Kuwait by Abdul Jabbar Marafi, 9K2DZ, and communications among Kuwaiti nationals trapped outside their country during the occupation.

Other amateur participants in these operations were the official guests of the Kuwaiti ministry of information and included: Naval Communications Specialist Scott Ward, N5DST, who served in operations Desert Shield and Desert Storm aboard the aircraft carrier USS John F. Kennedy; Frank Moore, WA1URA, a television executive and amateur from Fort Wayne, Indiana; John Troost, TG9VT, a businessman from Guatemala; and Lars Berglund, SM0CXM, of Sweden; Ezzat Sayed Ramadan, SU1ER, of Egypt; Roland Mensch, DK3GI, of Germany; and R. Schipper, PA0QRS, of the Netherlands.

The secret communications network was documented in *QST* ("Last Voice from Kuwait," May, 1991, p. 18) as well as in a videotape documentary of the same title produced by Frank Moore.

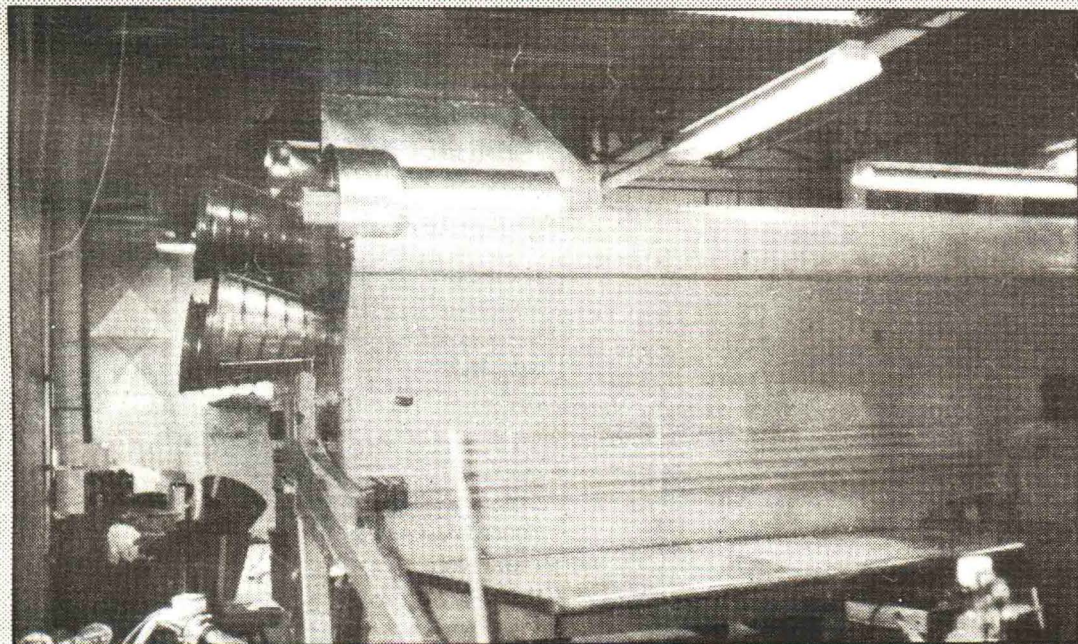
Highlights of the official visit included attendance at the National Liberation Day celebration marking the first anniversary of Kuwait's liberation; audiences with several Kuwaiti VIPs, including the minister of information, the minister of defense, and the director of the Kuwaiti Amateur Radio Society.

In addition, Ward and Moore held a brief meeting with the U.S. ambassador to Kuwait.

The visiting amateurs also participated in the operation of an Amateur Radio special event station, 9K2RA/NLD (National Liberation Day),

Please turn to page 13

A Different Kind of Shuttle



Shown here is the "Apollo Condor," a school bus being converted into a "space shuttle" for Dream Flight Wausau, a educational project about science and space for Wausau-area sixth grade students. The project, which has gained national attention, begins with "liftoff" on May 11. Read more about Dream Flight Wausau and Amateur Radio's part in the project on page 10 of this issue.

- Photo courtesy of Frederick Prehn/WX9W

ELMER

By Rich Regent, K9GDF



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What's Happening

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Edited by Kenneth A. Ebnetter, K9EN • 822 Wauona Trail • Portage, WI 53901

Swapfests and Other Social Events

SATURDAY, MAY 2, 1992. The Ozaukee Radio Club will sponsor its 14th annual Cedarburg Swapfest, at the Circle-B Recreation Center, Hwy. 60 and Cty. I. Contact ORC Swapfest, 11448 Laguna Dr., Mequon, WI 53092. (414) 242-4995.

SUNDAY, MAY 3, 1992. DeKalb Hamfest, Sandwich Fair Grounds, Sandwich, IL.

SATURDAY, MAY 9, 1992. Lakeshore Hamfest, Manitowoc, WI. Contact MANORAD Radio Club, P.O. Box 204, Manitowoc, WI 54221-0204. (see also ad elsewhere this issue.)

SUNDAY, JUNE 14, 1992. CWRA Swapfest, Stevens Point, WI. ARRL FCC exams, WAPR meeting, WNA meeting, Rib Mountain Repeater Assn. meeting. Contact Art Wysocki, N9BCA, 3356 April Lane, Stevens Point, WI. (715) 344-2984. (see also ad elsewhere this issue.)

SATURDAY, JULY 11, 1992. South Milwaukee Swapfest, Oak Creek, WI. Contact SMARC, P.O. Box 102, South Milwaukee, WI 53172. (414) 762-3235. (see also ad elsewhere this issue.)

SATURDAY, JULY 18, 1992. Eau Claire Hamfest. at the Fairgrounds Building in Chippewa Falls, WI. Contact: Liz Searing, N9EQR, 1129 McKinley Rd., Eau Claire, WI 54701. (715) 834-1303.

SEPTEMBER 19-20, 1992. Peoria Superfest, Peoria, IL. Contact Peoria ARC, P.O. Box 3508, Peoria, IL 61612. (309) 685-6698. (see also ad on back page.)

SUNDAY, OCTOBER 11, 1992. The KMRA 1991 Computer and Ham Radio Swapfest will be held at the Waukesha County Exposition Center, Hwys. J and FT in Waukesha, WI. Contact KMRA Swapfest, P.O. Box 411, Waukesha, WI 53187-0411.

SATURDAY, NOVEMBER 14, 1992. Fort Wayne, IN Hamfest. Contact AC-ARTS, P.O. Box 10342, Fort

Wayne, IN 46851.

SUNDAY, JANUARY 10, 1993. 21st Annual WARAC MIDWINTER swapfest, Waukesha County Expo Center Forum, Waukesha, WI. Contact WARAC Swapfest, P.O. Box 1072, Milwaukee, WI 53201. Please note this will be on a Sunday next year instead of the previous Saturday dates. (see also ad on back page.)

As a service to our readers, this section of Badger State Smoke Signals is available without charge to list your upcoming Swapfest, Hamfest, dinner, picnic, party or other event of interest to Radio Amateurs in Wisconsin and nearby areas. Send information on your event to Kenneth A. Ebnetter, K9EN, 822 Wauona Trail, Portage, WI 53901. In addition, space is available at attractive rates on our advertising pages. For information on rates and requirements for our advertising pages, please contact K9ZZ or K9EN.

Club Meetings



Due to space limitations, we cannot always carry the full listing of Wisconsin and area club meetings. Please see the March 1992 meetings column for the latest complete listing. The following are additions or changes since that listing.

MILWAUKEE RADIO AMATEURS CLUB

Last Thursday, Wauwatosa Savings and Loan (lower level) at 7500 W. State St. in Wauwatosa. No meetings in July, August and December. Meetings begin at 7:00 pm.

The Test Point



**Amateur Radio Examination Locations
and Schedules in the Wisconsin Area**

The following are known locations where Amateur Radio license examinations are scheduled in the Badger State area.

May 2, 1992	Ozaukee, WI (BE)
	Ozaukee swapfest
May 4, 1992	Eveleth, MN
May 9, 1992	Manitowoc, WI
May 9, 1992	Marshfield, WI
May 9, 1991	Ames, IA
May 9, 1991	Oak Forest, IL
May 9, 1992	Dixon, IL
May 9, 1992	Bloomington, MN
May 14, 1992	Onalaska, WI
May 16, 1992	Fond Du Lac, WI
May 17, 1992	Des Moines, IA
May 19, 1992	Milwaukee, WI (MRAC)
May 23, 1992	St Paul Park, MN
May 30, 1992	Milwaukee, WI (MRAC)
June 13, 1992	Dubuque, IA
June 14, 1992	Stevens Point, WI
June 16, 1992	Milwaukee, WI (MRAC)
June 27, 1992	Milwaukee, WI (MRAC)
July 11, 1992	Marshfield, WI
July 17, 1992	Eau Claire, WI
July 18, 1992	Eau Claire, WI
July 21, 1992	Milwaukee, WI (MRAC)
July 25, 1992	Milwaukee, WI (MRAC)
August 18, 1992	Milwaukee, WI (MRAC)
August 22, 1992	Fond Du Lac, WI
August 29, 1992	Milwaukee, WI (MRAC)
September 5, 1992	Dubuque, IA
September 12, 1992	Marshfield, WI
September 15, 1992	Milwaukee, WI (MRAC)
September 26, 1992	Milwaukee, WI (MRAC)
October 20, 1992	Milwaukee, WI (MRAC)
October 21, 1992	Milwaukee, WI (MRAC)
October 31, 1992	Milwaukee, WI (MRAC)
November 7, 1992	Menomonie, WI
November 9, 1992	Onalaska, WI
November 14, 1992	Fond Du Lac, WI
November 14, 1992	Marshfield, WI
November 17, 1992	Milwaukee, WI (MRAC)
November 21, 1992	Dubuque, IA
November 28, 1992	Milwaukee, WI (MRAC)
December 5, 1992	Stevens Point, WI
December 15, 1992	Milwaukee, WI (MRAC)

Monthly, First Sat. Racine, WI
(except January, July & August)
Monthly, Last Sat. Tomahawk, WI
(January thru October only)

Monthly, Third Sat. Loves Park, IL

Many Swapfests/Hamfests offer exam sessions. If not shown above contact the sponsoring club in the Swapfest column on page 2.

GENERAL RULES

FOR MOST EXAMINATIONS:

Be sure to check with sponsors in the event there are changes and/or errors in the dates or information given.

Most examinations require filing an FCC Form 610 and advance registration at least 30 days before the exam date. (Some VECs permit walk-ins. Check with sponsor.)

To register, you must first secure a copy of the current FCC Form 610 and fill it out completely (AND CORRECTLY). Get your form from an FCC Field Office, the ARRL or Badger State Smoke Signals. Send a 29¢ SASE if you request one from the ARRL or BSSS. In most cases, forms can also be obtained from the sponsoring group. ARRL/VEC examinations require a check for

Badger State Smoke Signals

Amateur Radio Education and Information

CHAIRMAN: Kenneth A. Ebnetter, K9EN, 822 Wauona Trail, Portage, WI 53901. Telephone (608) 742-3560.

EDITOR: Jim Romelfanger, K9ZZ, 412 1/2 Ash Street, Baraboo, WI 53913. Telephone (608) 356-4031.

TREASURER: Jim Decker, WB9UQT, P.O. Box 337, Baraboo, WI 53913-0337.

CONTRIBUTING AUTHOR: Richard R. Regent, K9GDF, 5003 South 26th Street, Milwaukee, WI 53221.

Subscriptions

1 year	(12 issues)	\$9.75
2 years	(24 issues)	\$18.00
3 years	(36 issues)	\$26.00

Special club package reduced rates are available. For information, contact Ken Ebnetter, K9EN.

When to Send It

The closing date for each issue is the first of the month for the next month's issue. For example, the closing date for the June issue is May 1.

The only exception is for participating clubs. Participating clubs are requested to send their material no later than SEVEN DAYS after the club's meeting. For

example, if a club meets on the 4th of the month, the material should be sent no later than the 11th of that month. This material is to be sent to the Editor.

Where to Send It

Address changes and corrections should be sent to Ken Ebnetter.

Editorial material, photographs, feature articles, display ads, and exchange papers should be sent to Jim Romelfanger.

Inquiries about advertising should be directed to Ken Ebnetter.

Swapfest information should be sent to Ken Ebnetter. Swapfest ads should be sent to Jim Romelfanger.

Subscriptions should be sent, with check or money order, to Jim Decker.

Conditions for Reprinting Material from Badger State Smoke Signals

Permission is hereby granted to reprint articles from *Badger State Smoke Signals*, providing credit is given to the original author, publication in which the article first appeared, and to *Badger State Smoke Signals*. This credit is mandatory, and no material may be printed unless it is given. This newspaper is produced by volunteer Radio Amateurs, and is non-profit. This newspaper is mailed from Portage, WI 53901.

Editorial Disclaimer

The opinions expressed in editorials, guest editorials, columns, articles, and letters from readers are the opinions of the authors only, and do not, unless otherwise stated, express or imply endorsement by *Badger State Smoke Signals*, or by any other individual or organization.

\$5.40 payable to "ARRL/VEC".

The FCC now requires applicants to show their original Amateur license to the VEC. A copy of your license must be attached to your FCC form 610. You will also be required to have a photo ID, or other acceptable identification.

Technician class licensees must show proof of testing before March 21, 1987, in order to upgrade to General with a code test only.

Additional information is given below.

MILWAUKEE RADIO AMATEURS' CLUB (MRAC/VEC)

TUESDAY DATES: At 6:30 p.m. at church, 11709 West Cleveland Ave., West Allis, WI.

SAURDAY DATES: At 8:30 a.m. in the lower level of Savings and Loan, 7500 W. State St., Wauwatosa, WI.

For Additional Information Contact: Jack Krause, W9JK, 1737 N. 116th St., Wauwatosa, WI 53226. (414) 774-6999 or Les Peterson, W9YCV, 9741 W. Howard Ave., Greenfield, WI 53228. (414) 321-4745.

Bring along your original license and two (2) good quality photocopies, plus two forms of identification, such a driver's license, etc. Also required are a pen and \$5.00 for the exam fee. WALK-INS are welcome. To register in advance, use a post card: print the grade of license you are applying for, and your name, address, and telephone number. Send the card to MRAC/VEC, c/o Jack Krause, W9JK, or Les Peterson, W9YCV at the addresses shown above.

BADGER EXAMINERS (BE) - MILWAUKEE

May 2, 1992. Ozaukee swapfest. (Ozaukee)

Unless otherwise noted, examinations are administered beginning at 1:00 p.m. to 3:30 p.m. at St. Nicholas Church basement, 5345 N. Green Bay Ave. (2 1/2 blocks south of Silver Spring), Milwaukee. Walkins are welcome. CW waiver forms are available. Please send a request with an SASE prior to taking an exam, so it is ready when attending the session. To register in advance, send a post card with your name, test or tests you wish to take, date you wish to take., your call sign, address and telephone number to Badger Examiners, Gary J. Sharbuno, W19M, 5119 W. Willow Rd., Brown Deer, WI 53223. Telephone (414) 355-0237.

FOND DU LAC - (W5YI-VEC)

Saturdays, May 16, Aug. 22, and Nov. 14, 1992.

The Fond du Lac County VEs will administer exams starting promptly at 1:00 pm, please be on time. Exams are given at the Red Cross Building, 272 N. Main St., Fond du Lac, WI 54935. Please use the back entrance. Talk-in on 147.09+. Walk-ins only, no preregistration is needed. For more info call: Gary Pelletier, KA9QOT (608) 837-3433.

MENOMONIE WI - ARRL/VEC

Saturday: Nov. 7, 1992

The Northern Wisconsin Radio Club sponsors exams from 9 to 11:30 a.m. at the U. W. Stout

Communications Center, 820 South Broadway, Menomonie, WI. Use front entrance of building. Walkins are accepted only to extent of available exam materials.

Contact: Jim Ley, NX9F, (715) 235-3998 (H); or (715) 232-1397 (O).

MARSHFIELD, WISCONSIN

1992 dates: May 9, Jul. 11, Sep. 12, Nov 14.

Sponsored by the Marshfield Area ARS. Second Saturday every other month, at St. Joseph Hospital, School of Nursing entrance. Room 124. St. Joseph Ave., Marshfield, WI. Walk-ins Welcome. Contact Walter Friant, WBOKIN, 2310 Wal-lonnie Dr., Marshfield, WI 54449.

RACINE, WISCONSIN - ARRL/VEC

Monthly - first Saturday, except January, July, and August.

Exams are given 9:00 to 11:00 a.m. at the Red Cross Building, 4521 Taylor Avenue, Racine. Walkins are permitted. Inquiries and registrations should be directed to William Fitchow, Jr., NW9P, 1912 27th Street, Kenosha, WI 53140, telephone (414) 658-8390.

TOMAHAWK, WI

Last Saturday of every month. Jan. thru Oct.

Tomahawk Volunteer Examiners (ARRL/VEC). Tomahawk, WI. No preregistration required, but appointment would be appreciated. Registration at 8:30 a.m. and testings starts at 9:00 a.m. For location or other information, inquire on 145.43 MHz. repeater or contact: Greg Garner, WA9W, 4088 Highway 51, Harshaw, WI 54529. Telephone (715) 453-7096.

EAU CLAIRE, WI (W5YI/VEC)

July 17 and July 18, 1992

9 a.m. to noon at St. Olaf's Parish Church School, 2407 North Lane, on Eau Claire's north side near the airport. FCC form 610s will be supplied at exam site. Walkins OK. Danish rolls and coffee available.

Exams will also be given at the ECARs Hamfest on July 17, Friday evening from 7 to 9 p.m. and on the Hamfest day itself, July 18, from 9 a.m. to 1 p.m. Contact Carl F. Searing, 1129 McKinley Rd., Eau Claire, WI 54703-2219, (715) 834-1303.

STEVENS POINT, WI - ARRL/VEC

June 14 and December 5, 1992

Contact: Joe Larson, (715) 344-1182

APPLETON, WI - ARRL/VEC

Contact: Larry Siebers, (414) 788-3823

ONALASKA, WI

May 14 and November 9, 1992

Contact: Rick Williams, KV9U, 534 Troy St., Onalaska, WI 54650. (608) 783-8028.

DUBUQUE, IOWA - ARRL/VEC

1992 examination dates: June 13, September 5, and November 21. The Great River ARC VEs are now field-stocked with examinations, which means that retests can be given immediately. Exams are held at 9 a.m. at the Central Fire Station, 9th and Central, Dubuque. Use the basement entrance on 9th Street. Talkins are on 147.84/24, 147.63/03, and 146.295/895 repeaters. Contact Mike Jozefowicz, NSOU, 2735 Hockory Hill, Dubuque, Iowa 52001, (319) 582-8563. (Thanks Art Evans KA9KLZ)

LOVES PARK, IL

Third Saturday of every month. Northern Illinois Volunteer Examiners (DeVry VEC). Held at North Suburban District Library, 6340 North Second St. (Hwy. 251), Loves Park, IL. Contact: Paul K. Dean, WB9HGX, (815) 987-6754.

This section of Badger State Smoke Signals is available to publicize your Volunteer Examiner Amateur Radio license examination schedules. Please send us your schedules of dates, times, and locations that you will be conducting examinations and we will include the information here. Be sure to include contact address and any other necessary requirements. Information should be sent to K9EN at the address shown on page 2.



OUR WANT ADS GET RESULTS

WANTED: Shure S20D Green Bullet microphone, must be older style. (608) 365-6681. Ask for Don.

FOR SALE OR TRADE: Small keyer and KNWD R-1000 .1 to 30 MHz digital receiver, AMN, AMN, LSB, USB, & CW. As New. WANTED: TS-130 s/v, FT-690 or 290R, MARK II or Nikon equipment. AA9BA, (414) 685-5018.

FOR SALE: Ancient Helicopter. Amazing toy flies on its own power! Plans \$1.00 ppd. Dr. Tom King, WF9I, 4817 Sierra Dr., Eau Claire, WI 54701.

FOR SALE: Colorful United States Stamps. 100 all different. \$1.00 postpaid. Richard Regent, K9GDF, 5003 South 26th St., Milwaukee, WI 53221.

THE WISCONSIN PACKETEER

(continued from page 14)

THE SIX METER BACKBONE

The six meter backbone now links a very large part of Wisconsin transparently. That means that the backbone does the work for you. For example, if you are in Wausau and want to talk keyboard to keyboard to a friend in Chippewa Falls, all you need to do is connect to WIAUW and then issue a connect to W9NNS-3. You enter the system on 2 meters, are connected through to Chippewa Falls on 6 meters and then a connection is made on two meters to the keyboard of W9NNS BBS. It all happens automatically. You do NOT need a six meter radio. No connects should be made to the backbone directly.

This suggests some cautions to users at this time: The six meter backbone is NOT open to level-two connects. This means that users MUST enter through a two meter node which is hard-wired to the backbone.

Further, the backbone is still in development. That means that the baud rate will be substantially increased in the weeks to come. So a 1200 baud TNC will soon not work on the backbone. While it is true that level two (user) connects are possible at this time, they are not allowed. If a need develops it is possible for the sysop to program the six meter node to refuse a user connect.

We are asking for the help of all packeteers to let the backbone "do its thing" by letting the system operate according to the plan at work: NO USERS on six meters!

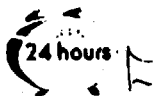
We also ask your help in another matter: Please DO NOT beacon your station at any time. But DO leave your radio and TNC on the air at all times. Never take it off. Then you will begin to experience the real fun of store-and-forward technology.

And finally, please DO NOT use the > N < command. We have severely limited the nodes that the system will propagate. This has been done to achieve a speedier connect along the normal routes. "Lift Nodes", those which show up on the node lists in "really good" propagation days will not show any more.

Remember the WAPR meeting in Oak Creek Swapfest on July 11 at 10:30 AM.

Signed: Bill Jablonske, W9NNS, chairman of WAPR: (Wisconsin Packet Radio Association)

Darrow's



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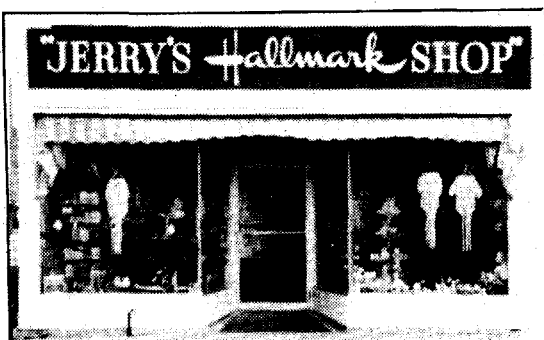
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■ Jerry's Hallmark Shop in Baraboo is where you will find a full selection of Hallmark products. And, Jerry's Hallmark Shop now has LIZZIE-HIGH dolls. Call them at (608) 356-6901.

■ Simply Amish, next to Jerry's Hallmark Shop, stocks some of the most rugged and finest-looking Amish-built furniture you will find anywhere. There is also a great selection of Amish dolls, quilts, and Amish and Mennonite cookbooks. Call Simply Amish toll-free at (800) 292-6474.

Jerry's Hallmark Shop and Simply Amish are at 516 Oak Street and 512 Oak Street in Baraboo, on the east side of Baraboo's historic courthouse square.



Wisconsin Nets Association Ltd.

Rob Hummel, WA9ZTY, Secretary • 202 Midvale Drive • Marshall, WI 53559

Wisconsin Nets

Net	WNA	Freq.	UTC	CDT	Mgr.
BWN	Yes	3984	1100	0600	W9AYK
BEN	Yes	3985	1700	1200	WB9ESM
WSBN	Yes	3985	2230	1730	K9UTQ
WNN	Yes	3723	2300	1800	KA9FVX
WSSN	Yes	3645	2330	1830	N9BDL
WIN/E	Yes	3662	0000	1900	WB9ICH
WIN/L	Yes	3662	0300	2200	W9NGP
NWTN	Yes	34/94	2330	1830	NS9Q
(Rhinelander area)					
RCRA	No	01/61	2330	1830	KA9OMC
(Mondays CST) (Menomonie Area)					
Gr. Bay	No	72/12	0145	2045	WB9NRK
(Green Bay Area)					
ARES	No	4.65/5.25	0100	2000	
(South East/South Central Wisconsin)					
RACES	No	3993.5	1300	0800	WA9OAY
(LSB Sunday)					

Section Manager's Notes



Richard R. Regent, K9GDF
5003 South 26th Street
Milwaukee, WI 53221

On June 13th, QCWA Chapter 55 meets for a delicious dinner and delightful meeting at the Port Washington Fish Shanty, social hour begins at 11 a.m., guests and visitors are welcome.

June 14th Central Wisconsin RA will hold its Swapfest, exams, along with WAPR and WNA meetings in the Stevens Point Student Center.

Watertown ARC will be celebrating their tenth anniversary on June 17th, possibly at a summer picnic. They will have an official sign posted to mark their adopted section of Highway 26, from the I-94 interchange to 1.6 miles north of Spruce Road. New WARC officers: pres N9JUJ, vp N9AAA, treas WA9YVE, secy WA9OAY.

N9HDV working balloon mobile when the wind is right.

Exams June 6th in Racine, NW9P; June 13th at Madison Junior High School, Appleton, contact KD9IA; June 16th, Milwaukee MRAC, W9JK; and June 27th Tomahawk, WA9W.

June 27th and 28th is Field Day, earn 100 bonus points for sending a proper message to either me or SEC WB9SMM.

New Net Manager of Badger Emergency Net is KE9VU of New Holstein.

Wisconsin Valley RA club station, W9SM, is getting a good workout, open to members daily.

Thought of the month: *The person not here is the one working on the problem.* □

Deadline Reminder

The June issue of *BSSS* must be completed and at the printer on Friday, May 23.

WISCONSIN WEB

Web Printing on Newsprint
and Uncoated Papers

327 Palisade Street
Merrimac, WI 53561

(608) 493-2181

Birds of a Feather Flock to Badger Weather Net



Jim, W9AYK of Oconomowoc, has his ducks lined up in a row exchanging fowl weather reports. They discuss ham radio events or share news and friendship over a cup of coffee on the Badger Weather Net (BWN). In complete control are KA9FVX Sundays, K9EP Mondays, KA9OSA Tuesdays, KA9KLZ Wednesdays, AG9G Thursdays, WB9WHQ Fridays, and WA9OAY Saturdays. As Net Control Stations, they make checking into the net a breeze and match operators who relay

weather reports quickly. Everyone is most welcome to check into the net with reports or maybe just listen to get live weather data. Jim is ARRL Net Manager for the BWN, which meets every morning at 6:00 a.m. or thereabouts on 3984 kHz, even when the weather is for the ducks. Some of the hale and hearty BWN gang lined up for the photo above, taken at the Madison Swapfest on April 5.

- Photo by Gary Pedersen/KA9BAE

Net News and Gossip

Written and Edited by the Net Managers

Wisconsin Intrastate Net/Late

Ed Rice, W9NGP, Net Manager
W126 Lang Road
Oconomowoc, WI 53066

The totals for the first quarter of 1992 are better than for the same period in 1991. Here is how they stack up:

	1991	1992
QNI	619	615
QTC	180	206

Amateur Radio Emergency Service Member, Emergency Coordinator Autopatches Fire Report

Tom, KB9UE of Woodruff, was driving on a cold day in March to visit a client when he saw smoke. A large supper club at Three Lakes that had been closed for many months was on fire. Tom quickly used ham radio to patch through the Vilas County repeater with the help of Bernie, KE9JE, and Mike, AA9Y, both of Eagle River, to alert the

QSP	126	141
MINS	995	1054

We have about the same number of checkins, but they are handling about 14% more QTC than in the same period of 1991. This is not just an increase in traffic listed that was never cleared. In 1991, the traffic cleared was 70% of the traffic offered. In 1992, it was 68%.

I am very happy to hear W9DND checking in again. Thanks, Art, for the business.

It's good to hear W9OT checking in from 9RN after a long absence. Welcome back to N9CKC, who is now checking in regularly.

N9BDL, the Super Sticker Licker, has checked into every session in the first quarter of 1992.

73, Ed

Fire Department. His report soon brought eight separate fire fighting departments with their fire fighters and equipment to contain the fire. Although there was extensive damage to the building, Tom's prompt report of the fire was of great assistance.

Tom has received approval for his Vilas County emergency plan and has met with the Emergency Coordinators from Lincoln and Oneida Counties to write an agreement of mutual aid.

- Richard Regent, K9GDF
5003 South 26th Street
Milwaukee, WI 53221



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HERE and THERE

Commonwealth of Kentucky Final State to Amend "Scanner Law"

Kentucky has become the final state to exempt licensed amateurs from its "scanner law." Kentucky Governor Brereton C. Jones signed H.B. 617 into law March 30, after companion bills passed both houses of the Kentucky legislature almost unanimously. Among those amateurs at the forefront of this effort were Kentucky Section Manager Steve Morga, WB4HNO, ARRL State Government Liaison Ron Landrum, KM4DX, and Dennis Thurman, KC4ZWT.

- ARRL Bulletin 34, 4/1/92

How to Get Your SAREX QSL Card

QSL cards for the STS-45/SAREX mission should be sent to the Sterling Park Amateur Radio Club, P.O. Box 599, Sterling Park, VA 22170. Include a large, business-size SASE. Mark on the envelope "STS-45 SWL" if you are looking for confirmation of a signal report. For two-way QSO confirmation, mark the envelope with "STS-45 QSL 2 WAY." Remember to include the date, time, and signal report with each card.

- ARRL Bulletin 22, 4/2/92

Indiana TV Station Lauded for Ham Radio "Kuwait Connection" Story

Television station WANE-TV in Ft. Wayne, Indiana, has won a national Headliner Award in the category of outstanding television documentary or editorial from the press club of Atlantic City.

The film, Last Voice from Kuwait, produced by WANE president and general manager Frank Moore, WA1URA, concerns Amateur Radio activity from Kuwait during its occupation by Iraq in 1990 and 1991.

Headliner Award winners include major market newspapers and network broadcasters, as well as small circulation periodicals and individual broadcasting stations, according to a WANE news release.

The film's producer and writer was WANE News Anchor Joe Gregory.

A story by the same name and on the same subject appeared in QST for May, 1991.

- ARRL Bulletin 13, 4/9/92

ARRL President, FCC Officials Confer on Amateur Radio Matters

American Radio Relay League President George Wilson, W4OYI, met with FCC officials in Washington, DC on March 13, 1992, his first official meeting with Commission staff since his election as president in January. Wilson met with Private Radio Bureau Chief Ralph Haller and Robert McNamara, chief of the Special Services

Division of the PRB; then with FCC Commissioner James Quello.

Wilson and the FCC officials discussed a number of topics, among them:

- Reciprocal privileges for Europeans holding the new CEPT licenses, for which draft legislation is now being considered by FCC before forwarding to the Department of State.
- Revision of FCC Rules Part 97.113, concerning "business communication."
- The League's petition for rule making to create a small subband at 222 MHz for "weak signal" operations.
- The reinstatement of issuance of "club call signs."
- BBS system operator (SYSOP) responsibility in packet message forwarding.
- Greater enforcement of FCC rules governing on-the-air behaviour.

- The ARRL Letter, 3/24/92

FCC Call Sign Update

The following is a list of the FCC's most recently issued call signs, as of April 1.

District	Group A Extra	Group B Advanced	Group C Tech/Gen	Group D Novice
0	AA0IF	KF0XV	N0RVA	KB0KCG
1	AA1BL	KD1BQ	N1LWR	KA1ZVR
2	AA2IM	KF2HJ	N2QDT	KB2OQN
3	WX3W	KE3CD	N3BTJ*	KA3ZXP
4	AC4PB	KO4VA	**	KD4MGS
5	AB5ET	KI5ZF	N5ZXX	KB5RIB
6	AB6KG	KM6SM	**	KD6HVC
7	AA7OF	KI7BC	N7XFW	KB7OVE
8	AA8GW	KF8TO	N8SVW	KB8NSU
9	AA9DV	KF9IV	K9OUN	KB9HOZ
Hawaii	**	AH6LU	WH6FP	WH6CPC
Alaska	**	AL7OE	WL7CN	WL7CEV
PR	**	KP4TN	**	WP4LAC

* The computer missed the following call signs, and they are loaded in the following sequence: After N3LZZ was issued, Group C Blocks N3BSA-N3BZZ are being issued.

** All call signs in this group have been issued in this area.

- ARRL Bulletin 35, 4/13/92

Father Marshall Moran, 9N1MM, Silent Key

Father Marshall Moran, 9N1MM, died April 14 in New Delhi, India. He was 86 years old, and had been Nepal's most famous amateur for more than 40 years. He was a native of Chicago and a Jesuit priest who operated a school for young children in the mountains of Nepal.

- From ARRL Special Bulletin 15, 4/16/92

Precious Public Relations

Ham radio got a boost on Thursday, March 26, with some of the best TV coverage seen for a while, when the David Letterman Show featured Veronica Harrington, KC6TQR, a six-year-old Tech from California! She was a real doll, and smart as a whip. When Letterman wanted to get on the ham radio and talk also during a demonstration QSO on TV, KC6TQR even applied the third-party information!

- KA9DZM via packet in Westlink Report, 4/13/92

Foundation for Amateur Radio

Amateur Radio 1992 Scholarships Announced

Two Wisconsin Clubs Offer Seven Awards Totalling \$4,250

The Foundation for Amateur Radio Inc., a non-profit organization with headquarters in Washington, D.C., plans to administer 45 scholarships for the academic year 1992-1993 to assist licensed Radio Amateurs. The Foundation, composed of fifty local area Amateur Radio Clubs, fully funds five of these scholarships with the income from grants and its annual Hamfest. The remaining forty are administered by the Foundation without cost to the donors.

Licensed Radio Amateurs may compete for these awards if they plan to pursue a full-time course of studies beyond high school and are enrolled in or have been accepted for enrollment at an accredited university, college, or technical school. The awards range from \$500 to \$2000, with preference given in some cases to residents of specified geographical areas or the pursuit of certain study programs. Clubs are encouraged to announce these opportunities at their meetings, on their nets, during training classes, and in their club newsletters.

Two Wisconsin clubs offer scholarships administered by the F.A.R. The clubs and awards are:

South Milwaukee Amateur Radio Club Scholarships: This club offers four scholarships of \$500 each. Applicants must hold an Amateur Radio license, and intend to seek an Associate or baccalaureate degree in Electrical Engineering or technology from a college or university in the U.S. They may reside in Wisconsin, Illinois, or Indiana, with preference given to Wisconsin residents.

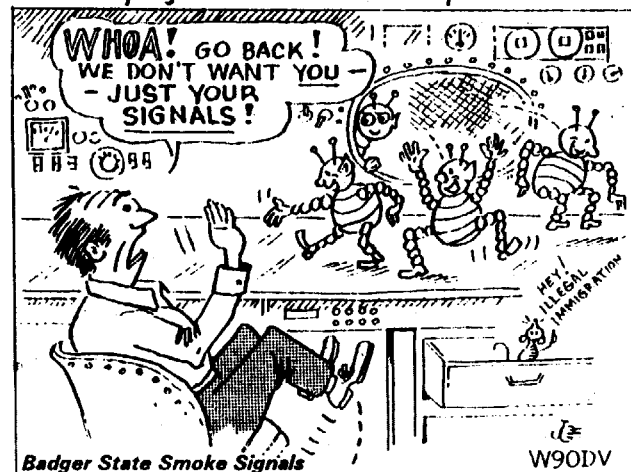
WARAC Memorial Scholarships: The West Allis Radio Amateur Club (WARAC) offers three \$750 scholarships. Applicants must hold an Amateur Radio license, be residents of the state of Wisconsin, and plan to attend a school in Wisconsin, pursuing at least an Associate degree.

Additional information and an application form can be requested by letter or QSL card, postmarked prior to May 31, 1992, from FAR Scholarships, 6903 Rhode Island Avenue, College Park, MD 20740.

The Foundation for Amateur Radio, incorporated in the District of Columbia, is an exempt organization under Section 501(c)(3) of the Internal Revenue Code of 1954. It is devoted exclusively to promoting the interests of Amateur Radio and those scientific, literary, and educational pursuits that advance the purpose of the Amateur Radio Service.

- From Foundation for Amateur Radio news release and Dave Knaus, WA9POV

★★ NEWS REPORT - Government is building a super receiving station in the Mohave Desert to listen for any signs of life from outer space.



Badger State Smoke Signals

Subscription Form • Regular Individual Subscription Rates

1 year: \$9.75 • 2 years: \$18.00 (save \$1.50) • 3 years: \$26.00 (save \$3.25)

PLEASE PRINT!

Name: _____ Call Sign (if any): _____

Address: _____ City: _____ State: _____ ZIP: _____

☐ 1 year ☐ 2 years ☐ 3 years ☐ New ☐ Renewal

Send this form, with your check or money order, to Jim Decker, WB9UQT, Treasurer, P.O. Box 337, Baraboo, WI 53913. **Please do not send cash!**

International Transformers

By John W. Frank, WB9TQG
P.O. Box 5003
Madison, WI 53705

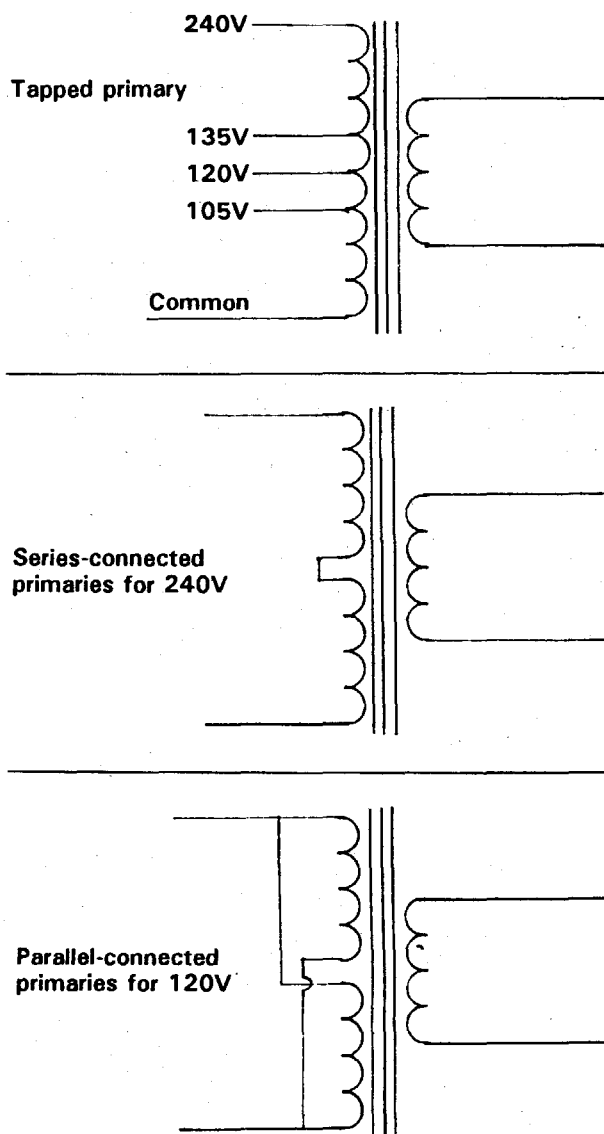
Santiago, Dan Diego, or San Marino? This is the question facing a designer. This is not a question of where to go on vacation, but rather a question of where a piece of electronic equipment will be used.

Different countries use different line voltages, and provisions must be made in equipment design to accommodate them. Two of the most common ways of making a power transformer operate properly on different voltages are the tapped primary and the double primary.

The tapped primary uses one transformer winding with taps for different voltages. As shown in the schematic, the primary winding has a common terminal and taps which provide the proper turns ratio for the desired input and output voltages. This type of transformer is often used in home entertainment equipment and some lower-powered ham radio equipment.

Equipment which will be used with 120 or 240 volts may use the double-primary type of power transformer. One of the advantages of this system is that equipment draws about half the current at 240 volts that it would at 120. When connecting the two primaries together, it is very important to get the windings connected with the proper phase. If the primary windings are wired out of phase, there will be little or no voltage across the secondary winding.

For detailed information on power transformers, I would recommend the book *Electrical Course for Apprentices and Journeymen* by Roland E. Palmquist, chapters 25 through 29. □



South-Central Wisconsin Severe Weather Net Readies for Another Season

By John Offerdahl, KC9XH
Emergency Coordinator,
South-Central Wisconsin SkyWarn Net
110 Lincoln Street, Verona, WI 53593

Another Winter is drawing to a close, and thoughts must again turn to the impending season of severe weather. As coordinator of South-Central Wisconsin SkyWarn, I wish to briefly discuss operation of this year's weather net.



As in the past, the net will activate on the 146.28/.88 repeater. This system occupies tower space high atop the Baraboo bluffs, and is graciously provided at no cost by WOLX Radio (FM 94.9). Several satellite receiver sites have also been established in southern Wisconsin, and may be accessed by setting your PL tone to 123 Hertz. These remote sites will increase system access for those using HTs or low elevation "storm" antennas. *If the Baraboo system goes down during a net, operations will transfer to the 147.75/.15 repeater, located in Madison.*

All hams are encouraged to monitor the net during severe weather and to report local weather activity to net control. Reportable weather includes:

- Wind exceeding 50 m.p.h. (As a rule of thumb, this is when small branches and limbs begin to break from trees).
- Hail 0.50" in diameter or larger,
- Obvious funnel clouds and tornado touch-downs,
- Heavy rain which could lead to flooding, and
- Incessant lightning.

When reporting local activity, hams should initially identify themselves with their entire call sign. In the interest of efficiency, net control may then respond with only the suffix, e.g., "X-H, go ahead" or "X-ray Hotel, go ahead." Reporting hams should also give their location relative to a well-known geographic landmark, e.g., "I-90 at the Wisconsin River."

Activity reported to net control is simultaneously monitored by a liaison station located at the National Weather Service (NWS) office in Madison. The liaison station apprises the NWS radar operators of surface reports, allowing more precise interpretation of radar images. In return, the liaison informs the net of rapidly-changing weather conditions and statements provided by the NWS.

The net will activate under either of two status levels during severe weather.

FULL ALERT: Activation under Full Alert status will occur whenever severe thunderstorms or tornado warnings are issued for any portion of south-central Wisconsin. *During full alert activation, only traffic related to severe weather or other emergency traffic shall be allowed, and all communications will pass through net control.*

STANDBY STATUS: Activation under Standby Status may occur when severe weather is imminent but no warnings are yet issued. While in Standby Status, net control may allow routine, informal traffic; however, stations should pause frequently to allow net control to inform the net of sudden changes in weather conditions.

When necessary, weather net-related announcements shall be passed to the ham community via three existing nets. They include the CWRA Swap Net (Sundays at 10 a.m. on the 146.28/.88 repeater), the Dane County ARES Net (Wednesdays at 8:30 p.m. on the 146.34/.94 repeater), and the MARA Net (Wednesdays at 9 p.m. on the 147.75/.15 repeater).

I wish to thank those who have participated in the weather nets in past years. The net provides not only needed information to the NWS, but also, provides weather information and updates appreciated by recreationists and others who monitor the net.

Thanks and 73. □

Central Wisconsin Radio Amateurs, Limited

presents its 15th Annual

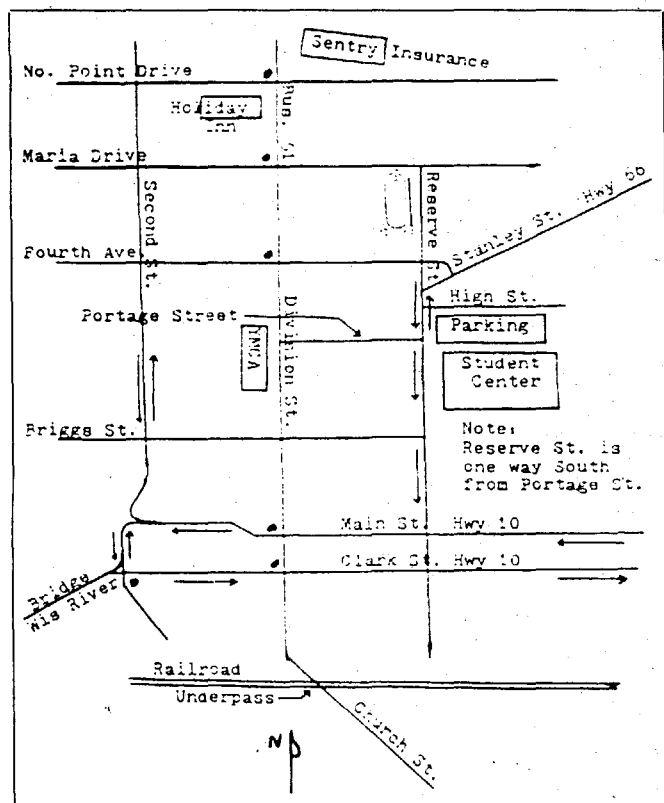
SWAPFEST

Sunday, June 14, 1992

UW - Stevens Point Student Center

ADMISSION \$3

6:30 AM	Vendor setup (6' tables - \$2 before May 15, \$4 thereafter)
8:00 AM	SWAPFEST opens
9:00 AM	ARRL FCC Exams *
10:00 AM	WAPR Presentation - 6 meter Packet Network
11:00 AM	WAPR meeting
TBA	WNA meeting
11:00 AM	Rib Mountain Repeater Assn. meeting
12:30 PM	Prize Drawings
1:00 PM	Shutdown



* - Exam participants must bring:

- 1) Original license
- 2) Photocopy of license
- 3) \$5.40 Check to ARRL/VEC

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A Record-Setting Trek

The Mother of all Balloon-Carried Amateur Radio Flights

By Steve Loeffler, WB9ZRE

123 West Oshkosh Street, Ripon, WI 54971

Despite a favorable weather forecast, the scheduled flight of the Hillsboro, WI High Altitude Balloon Carrying Amateur Radio on Saturday, March 21 was delayed by poor weather conditions. The anticipated high pressure cell expected to be over Wisconsin on Saturday morning, instead tracked into Michigan, resulting in a low pressure front sweeping across Wisconsin and depositing inches of snow throughout the state. The mission was postponed 24 hours, when near optimum launch conditions were expected.

This flight seemed to have its initial share of minor setbacks. The first problem was encountered when a test of all simultaneous transmitters developed an intermodulation problem with the 10 meter repeater downlink. The only solution to this problem, without rescheduling the flight for April, was to remove the downlink transmitter. Additionally, the digital voice IDer that was to be included on the flight, compliments of Bill Brown, WB8ELK, (and sent via AIRBORNE 2nd day), did not arrive until Monday - 5 days after it was sent - and a day late for the flight!

Despite these inconveniences, the flight crew was optimistic for the Sunday morning launch.

Sunday morning weather was, indeed, optimum for a balloon flight. The launch crew arrived at launch site at about 9:00 a.m. to set up equipment, and begin filling the balloon. Net control stations were updated on the status of the balloon preparations on the Baraboo repeater and reported propagation conditions on their respective HF net frequencies.

At 11:30 a.m., the Hillsboro launch team reported a successful launch of the TA-1000, hydrogen-filled balloon, carrying a 2-meter repeater and 8 HF



The Balloon-Carried Amateur Radio package that made a record-setting flight March 22 was on display at the Madison Swapfest on April 5. The package was shown and explained by Linda Mayenschein, KA9CHM (wife of Joe, WB9SBD), Hillsboro, WI, and Steve Loeffler, WB9ZRE, Ripon, WI. Steve is the author of this story.

- Photo by Jim Romelfanger/K9ZZ

beacons. Almost immediately after launch, stations throughout Wisconsin reported the acquisition of the repeater's signal.

"Murphy" again made his presence known when, shortly after launch, the repeater audio became intermittent. During these intermittent repeater audio "blackouts", lasting 5-10 minutes at a time, the repeater transmitter would continue to transmit, allowing the 5 chase/recovery crews to obtain an extremely accurate "fix" on the balloon's azimuth and elevation.

Continued on next page

Wisconsin Repeater Directory

Courtesy of the Wisconsin Association of Repeaters

The WISCONSIN ASSOCIATION OF REPEATERS is an organization of trustees and representatives of repeaters, state-wide, whose goal is mutual cooperation on the VHF/UHF spectrum, in the voluntary spirit of Amateur Radio.

General Frequency Coordination Policies

1. We attempt to place no two repeaters on the same pair closer than 120 miles.
2. We attempt to place no repeater on a 15 kHz split pair closer than 40 miles to any adjacent 30 kHz standard spacing machine.
3. We not only assist proposed repeaters in finding a frequency where possible, but we actively attempt to protect coordinated repeaters' frequencies from interference whenever possible.
4. W.A.R. has suggested band plans for most of the FM spectrum, a subaudible tone plan for the State of Wisconsin, and all necessary information for coordination of new or modifications to existing repeaters. Contact the Frequency Coordinator: Nels Harvey, WA9JOB, Wisconsin Association of Repeaters, P.O. Box 23166, Milwaukee, WI 53223.

Key to Codes in Listings

O	Carrier Access	B	Burst
PL	Sub-Audible Continuous Tone	T	Touch-Tone
W	Whistle	C	Closed Private Repeater
A	Autopatch	(CA)	Closed Private Autopatch
E	Emergency Power	L	Link and/or Crossband
P	Portable	R	RACES Affiliated
Y	RTTY/ASCII	Z	Autopatch to Law Enforcement
PAC	Packet Data Exchange	X	Wide Area Coverage

Wisconsin Sub-Audible Tone Plan By Region

North Central - 2A, 114.8 HZ.	North East - 1B, 107.2 HZ.
North West - 2Z, 110.9 HZ.	South Central - 3Z, 123.0 HZ.
South East - 3A, 127.3 HZ.	South West - 3B, 131.8 HZ.

Standard Inputs Unless Otherwise Noted

-600 kHz below 147.00 MHz	+600 kHz to 148.00 MHz
-1.6 MHz for 220 MHz	+5 MHz for 440 MHz
421.25 MHz TV Video + 18 MHz	425.75 MHz TV Aural, + 9 MHz

Location	Rg	Output	Call	Access	Update	OK=*	Sponsor	Updated
ALGOMA	NE	146.805	WB9RJ8/R	O PL 107.2 L		*	WB9RJ8	03/14/92
ALLENTON	SE	442.350	N9GMT/R	O A E L X PL 114.8			L-FM 38	08/24/90
ANTIGO	NC	145.310	KD9HH/R	O		*	KD9HH	03/12/92
APPLETON	NE	145.150	KB9BYP/R	O CA E Z PL 107.2		*	A.R.E.S.	03/14/92
APPLETON	NE	145.330	WD9FLJ/R	O PL 107.2			F V VHF A	03/26/91
APPLETON	NE	146.760	K9QQO/R	O			N9LVS	03/22/92
APPLETON	NE	147.195	N9LVS/R	O E L PL 107.2			WB9IYV	11/29/90
APPLETON	NE	443.025	WB9IYV/R	C		*	W9DKY	03/20/92
APPLETON	NE	443.650	W9DKY/R	O			N9LVS	03/22/92
APPLETON	NE	1282.200	N9LVS/R	O E L		*	ST.CR CD	03/27/91
BALDWIN	NW	145.130	W9AVX/R	O			ST.CR RA	03/18/91
BALDWIN	NW	147.330	WD9GWR/R	O			C W R A	05/11/91
BARABOO	SC	146.880	K9YXW/R	O E X			L-FM 38	09/21/91
BARABOO	SC	443.900	N9BF/R	O A L PL 114.8		*	NLAND ARC	03/12/92
BAYFIELD	NW	146.610	W9BCY/R	O				

Location	Rg	Output	Call	Access	Update	OK=*	Sponsor	Updated
BELDENVILLE	NW	224.840	WB9WOT/R	O A E		*	WB.A.T.S.	03/20/92
BELOIT	SC	146.670	WA9JTX/R	O			BELOIT AR	03/25/91
BELOIT	SC	224.300	WB9UBM/R	O TT		*	C.B.S. RG	03/14/92
BERLIN	SC	443.850	N9AOZ/R	O A PL 123.0		*	N9AOZ	03/14/92
BURLINGTON	SE	146.745	WB9CAS/R	O A			WB9CAS	12/28/91
BURLINGTON	SE	224.060	N9BBQ/R	O PL A E			SE WI ERS	03/20/90
CHIPPEWA FALLS	NW	146.880	WA9PAM/R	O		*	WA9PAM	03/12/92
CHIPPEWA FALLS	NW	444.350	WA9PAM/R	O		*	WA9PAM	03/12/92
COLGATE	SE	444.725	NY9Y/R	O			NY9Y	02/20/90
CRIVITZ	NC	145.470	KA9YQJ/R	O PL 114.8 CA			KA9YQJ	08/20/90
DELAFIELD	SE	146.820	W9OOH/R	O CA E X PL 127.3			SEWARS	04/24/91
DELAFIELD	SE	444.125	WB9WHG/R	O PL 114.8			SEWARS	04/24/91
EAGLE RIVER	NC	145.390	KD9PT/R	O		*	KD9PT	03/12/92
EAU CLAIRE	NW	146.910	K9UXP/R	O A E X			E C ARC	03/18/91
EAU CLAIRE	NW	147.195	KA9LJK/R	O			KA9LJK	07/16/90
EAU CLAIRE	NW	147.240	KA9ELD/R	O CA E			E C ARC	03/18/91
EAU CLAIRE	NW	443.300	KB9R/R	O E		*	KB9R/R	03/12/92
EAU CLAIRE	NW	444.675	KA9LJK/R	O			KA9LJK	07/16/90
ELKHORN	SE	146.865	WA9AJW/R	O			W CO ARES	06/08/90
ETTRICK	SW	146.700	WA9HCZ/R	RTTY 2125 HZ MARK		*	WA9HCZ	03/12/92
FOND DU LAC	NE	147.090	WD9ESH/R	O A E			FOND ARC	03/14/90
FOND DU LAC	NE	223.740	WA4COY/R	O B CA			WA4COY	12/14/91
FOND DU LAC	NE	444.150	WA4COY/R	O B A PL 107.2			WA4COY	12/14/91
FORT ATKINSON	SC	224.420	N9DIT/R	PL			N9DIT	03/14/90
FRANKLIN	SE	444.625	K9WQG/R	O			K9WQG	11/22/90
FREEDOM	NE	224.220	AA9A/R	O PL			AA9A	11/15/90
FREEDOM	NE	224.860	KD9IA/R	O			KD9IA	02/26/92
FREMONT	NC	147.015	N9AOT/R	O A L 29.600 TT		*	W.A.C.O.	03/22/92
GERMANTOWN	SE	147.045	WB9EFP/R	O CA			WB9EFP	04/26/91
GERMANTOWN	SE	224.180	W9CQO/R	O		*	O.R.C.	03/14/92
GERMANTOWN	SE	443.225	WD9DH1/R	O PL 114.8			W E R A	03/12/92
GILLET	NE	224.480	N9MPB/R	O PL 114.8		*	N9MPB	03/12/92
GLIDDEN	NW	444.650	N9EDV/R	O INPUT 144.65		*	N9EDV	01/06/92
GRAFTON	SE	443.750	WA9POV/R	PL 127.3			M UHF SO	03/14/92
GREEN BAY	NE	147.120	K9GB/R	O A E Z X		*	G B M&K	03/12/92
GREEN BAY	NE	147.270	KE9PW/R	O PL 107.2 31U/32D			N+ WRL	03/28/91
GREEN BAY	NE	147.360	K9EAM/R	O A E Z			GB M&K	03/12/92
GREEN BAY	NE	223.940	K290/R	O A E		*	WA9SWX	03/12/92
GREEN BAY	NE	224.140	K290/R	O A E PL 107.2		*	RA RMT	03/12/92
GREEN BAY	NE	443.500	WA9SWX/R	O A E Z		*	GB M&K	03/12/92
GREEN BAY	NE	443.750	KB9AMM/R	O			KB9AMM	03/09/91
GREEN BAY	NE	444.200	WB9VJV/A	C			WB9VJV	06/08/90
GREEN LAKE	SC	146.955	KB9WC/R	O E			G FOX ARC	03/26/91
GREEN LAKE	SC	444.400	KB9WC/R	O			G FOX ARC	03/26/91
GREENFIELD	SE	52.880	WB9WKR/R	O		*	GF'LD 6RS	03/12/92
HAYWARD	NW	147.255	N9EGE/R	O CA			NVWA	05/02/91
HAYWARD	NW	444.850	N9EGE/R	O		*	N9EGE	03/12/92
HERTEL	NW	147.300	WB9RAY/R	O A E		*	B.A.R.S.	03/12/92
HERTEL	NW	224.500	WB9RAY/R	O A E		*	B.A.R.S.	03/12/92
HERTEL	NW	443.500	WB9RAY/R	O A E		*	B.A.R.S.	03/12/92
HILLSBORO	SW	145.370	KA9WNX/R	O			WB9SBD	03/09/91
HIXTON	SE	146.940	KC9YE/R	O		*	T-J RA	03/12/92
HUBERTUS	SE	145.250	KA9HLP/R	O			A.R.E.S.	11/24/89
IRMA	NC	146.730	K9GTQ/R	O			K9GTQ	03/25/90
JANESVILLE	SC	145.450	WD9ACY/R	O A E			R A T SYS	03/30/90
JEFFERSON	SC	145.490	W9MQB/R	O			TCARC	05/13/91
JUNEAU	SC	146.640	W9TCH/R	O A E 2911 WX			ROCK R RC	03/29/91
KAUKAUNA	NE	444.450	N9DZ/R	O CA		*	N9DZ	03/14/92
KENOSHA	SE	147.075	WA9YTH/R	O A E PL 127.3		*	WA9YTH	03/22/92
KENOSHA	SE	224.800	WB9LST/R	O A E PL 114.8		*	K.A.R.S.	03/20/92
LA CROSSE	SW	29.640	KE9XQ/R	O			KE9XQ	04/20/91
LA CROSSE	SW	146.760	K9CUT/R	O			L C R ASC	03/09/91
LA CROSSE	SW	146.865	KE9XQ/R	O			KE9XQ	04/20/91
LA CROSSE	SW	146.970	K9YB/R	O A E		*	RVRLNDARC	03/12/92
LA CROSSE	SW	147.090	N9ETD/R	O			NVARA	05/28/91
LA VALLE	SC	442.400	W9EBF/R	O PL 123.0			W9EBF	08/25/91
LAC DU FLAMBEAU	NC	146.670	N9AFN/R	O PL		*	N9AFN	03/12/92
LADI	SC	147.225	K9EY/R	O CA E PL 114.8		*	K9EY	03/20/92
MADISON	SC	146.685	W9YTT/R	O PL 107.2		*	UH-B ARS	07/20/90

Ham Radio Balloon's Marathon Flight

Continued from previous page

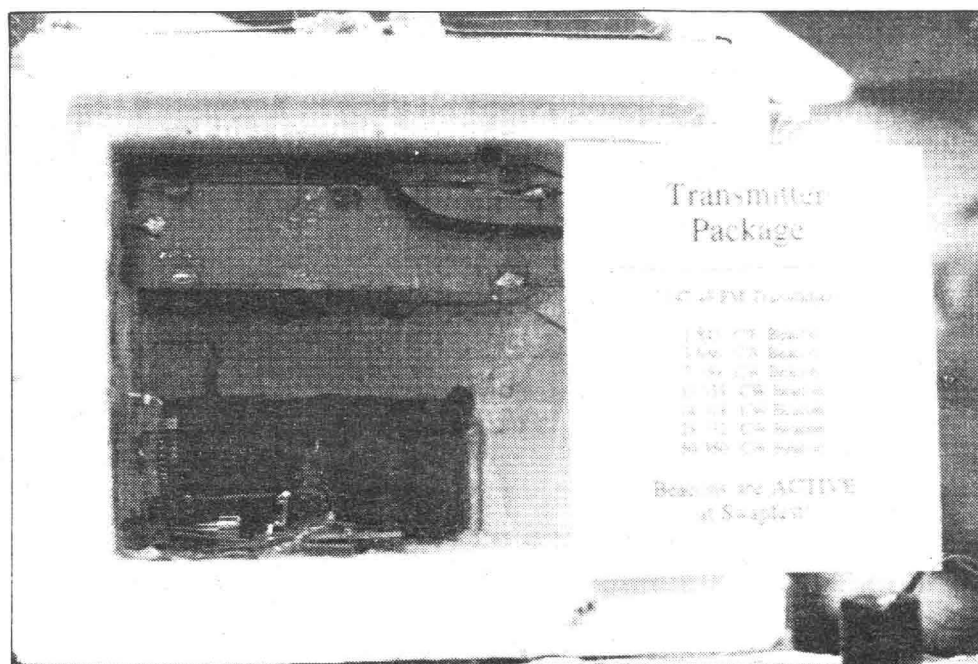
An anticipated flight of 3 hours was anticipated for this mission, during which the balloon would rise to approximately 125,000 feet, burst, and then parachute the radio packages safely back to the earth. This flight was an exception. Due to strong "shear" winds at the upper altitudes of the jet stream, the balloon was not able to continue its planned ascent to burst altitude. Instead, it was trapped at the altitude of the shear winds, and was pushed southeast by the jet stream.

It became apparent to the chase crews, through radio triangulation, that the balloon was not rising and extended flight path plots were made, indicating that the balloon would cross the Wisconsin - Illinois border just north of Rockford, IL and pass over Elgin, IL on a path into central Indiana.

When the balloon crossed into Illinois, Joe, WB9SBD, declared it a "run-away" and began making telephone calls to Amateur Radio contacts in Illinois and Indiana in order to mobilize a tracking and recovery effort. (Wisconsin chase/recovery crews were not able to catch up to the balloon now caught in the jet stream and were given permission to return home as Illinois and Indiana tracking teams were mobilized). The balloon now could conceivably stay aloft for days, as long as it remained trapped in the jet stream!

It was with a sigh of relief that Joe received a telephone call from his sister-in-law, telling him that they had spotted the balloon flying over their home in Elgin, and that the balloon had apparently pushed thru the shear winds and was ascending to burst altitude. (The balloon was now at 90 - 100,000 feet). A neighbor was attempting to photograph the balloon thru his telescope, and was able to positively identify it.

The balloon finally reached its burst altitude and began its descent into the western Chicago suburbs. Illinois chase/recovery crews were able to track the descending package and plot its landing site as between Bensenville and Rosemont, Illinois. Further triangulation refined the location of the landing site to near the American Airlines cargo hanger at O'Hare Field. After FAA approval, and with a police escort through security fences, the package was recovered by the Illinois chase/recovery crews around 9:30 p.m.



Correspondence

...from our readers



"Experts" About Ham Radio Balloon Flights Need to Get Their Facts Straight

The following letter is from Joe Mayenschein, WB9SBD, Project Leader for the Hillsboro Balloon-Carried Amateur Radio flights.

The balloon that we've done lately have been fun, exciting, and a learning experience for all those involved. That's the key word: INVOLVED!

It seems that during each flight a large number of people join in on the fun in many ways. But there also seems to be a small group that "sits in the weeds," on the side, not joining in the activity. It would be fine if that was all they did, but no!

For days or even weeks after a flight, these people get on the various repeaters across the state and talk about aspects of the flight they know nothing about.

After the first flight back in August, one person was heard to say that the parachute never opened, and the package fell like one sick puppy, smashing into the ground, and he hoped nobody was underneath it for they would have been killed instantly! Well, instead of flapping his jaws, all he had to do was ask one simple question. If it took two hours to get up to one hundred thousand feet, why did the trip down take only 45 minutes? These payloads use a parachute to slow their descent, and a parachute needs air resistance to work. At 100,000 feet, only 1% of the earth's atmosphere remains. At 60,000 feet, it's still only 6%, and even as low as 40,000 feet, the air is still only 16% of that at sea level. Some of these packages have even gone supersonic during the upper portions of their descents, only to slow down when near the ground, and then they gently land.

That is exactly what happened in August, for the 3/4" thick styrofoam box wasn't even dented! That's pretty good for something that "smashed into the ground so fast it may have killed somebody."

Now for the March 22, 1992 flight.

First of all, let me apologize for the malfunction that occurred; it's too bad the receivers locked up or whatever happened. (We have yet to find out.)

When the two-hour flight became a six-hour flight, the "in-the-weeders" were heard to say that we under-inflated the balloon, causing it to rise very slowly. They weren't at the launch site, so how could they know how much lift was in the balloon? If they would have just listened closely to the reception reports, they would have known that the balloon did indeed climb at the desired 1,000 feet per minute!

What really happened were two things. First, the stratosphere was in a condition called "stratwarm," and, second, the effect of the "stratwarm" caused the balloon to turn into a condition or situation called "super-pressure," cancelling the lift. Near sundown, the "stratwarm" condition weakened, allowing the balloon to continue its upward journey, finally to burst and parachute to the ground.

I won't get into the details of how these two conditions made the flight last so long now, but maybe some other time the "in-the-weeders" might ask to find out and learn something.

Now for the last part of the flight: where the package landed - right in O'Hare Field! Yes, I said O'Hare International Airport! Oooooooh! So irresponsible, so dangerous! How could we be so reckless as to endanger so many lives!?

Most, if not all, of these "in-the-weeders" have no idea what is involved in having these flights. The packages have strict federal guidelines as to size and weight limitations, so that even if a direct impact with an aircraft should happen, the aircraft would sustain no damage.

These flights are made under federal rules and laws. A complete and detailed flight actual flight plan has to be filed with and OK'd by the FAA! Two days before the planned flight, telephone conversations occur with head personnel of the air traffic control center for our area, to brief him or her. On the day of the flight, about a half-hour before the flight, a call is made to tell them that the flight will begin shortly. More calls are made when the balloon is released, again when the package clears 60,000 feet (above 60,000 feet is uncontrolled air space, and they don't care what you do up there), again after the balloon bursts and is re-entering the 60,000-foot level, and again finally when the balloon is on the ground.

Another rule is that a radar reflector must be included so that the FAA can track the balloon. They know constantly its exact location at all times. And, even on this flight, the FAA knew exactly where the balloon was.

I was told after the Madison Swapfest that many people were saying that the FAA was mad. But, they would not reveal who these people were!

On the Monday morning after the flight, I had telephone conversations with four key personnel with the FAA: 1, the actual radar operator who was in control of our sector; 2, the radar operator at O'Hare; 3, the head supervisor at Chicago Central (the Chicago Center is the air traffic control center for our area); and, 4, the main

federal supervisor for the entire midwest. And, ALL FOUR had no problem with where it landed. So, if all the people who are responsible for air safety didn't care, why do the "in-the-weeders" keep digging up bad feelings about it?

One last thing: People keep harping about having liability insurance for these projects. Great! I found insurance for \$250.00 a year that will provide \$1,000,000 coverage. Well, will all of these people who crab about no insurance help contribute to get it? Nooooo! Lots of people have fun, crab, bitch, enjoy, worry, but help finance them? Nope! We even asked for

May 1992 • Badger State Smoke Signals 9
donations during the Madison Swapfest. A whopping \$2.00 was donated!

I'm not rich; I make less than \$200.00 a week, and that is for a family of three. The balloon itself can cost as much as \$100.00, so I do these balloon launches for the love and fun of experimenting in Amateur Radio.

In closing, if you're not part of the group doing the experiments, if you didn't help financially, if you don't know information from inside the group exactly what you're talking about, then please keep your mouth shut!

73.

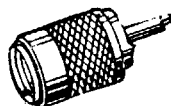
- Joe Mayenschein, WB9SBD, Hillsboro Balloon Center

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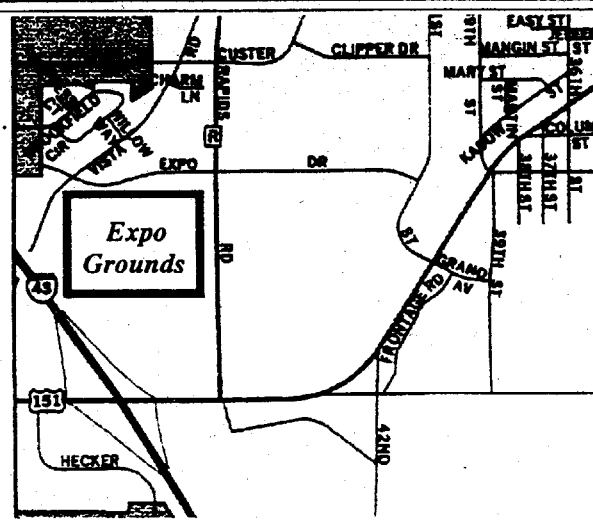
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More Than 700 Sixth-Graders to Take Part

"Dream Flight Wausau" is Scheduled for Liftoff May 11

By Jim Romelfanger, K9ZZ
Editor, *Badger State Smoke Signals*

Redefining "Shuttle Bus"

There are shuttle busses used all over the country for shuttling people from place to place. But there is a bus in Wausau that will be more than just a shuttle bus; it is going to be a *shuttle bus*.

In a project called "Dream Flight Wausau," a school bus has been greatly modified, fitted with equipment, experiments, and communications gear, and has become a simulated space shuttle. The "space shuttle" will travel to all nine "planets" in our solar system; those "planets" will be the thirteen elementary schools in the Wausau School District. Since there are currently only nine known planets in the solar system, four "planets" have been added, such as "Mars II," etc., to bring the planet total to 13.

Although this shuttle, named the "Apollo Condor" by the sixth-graders, will never leave the ground, it will present more than 750 sixth-grade students in the Wausau School system with a unique opportunity to learn a great deal about science. It will create interest in the space program, not only in the students, but in the general public, too.

How the Project Began

Dream Flight Wausau was an idea of Sharon Ryan, a Wausau elementary school teacher who was named Elementary School Teacher of the Year in Wisconsin in 1991. The project has grown so much and has gained such notoriety that it appears certain that Governor Tommy Thompson, Senator Robert Kasten, and Wisconsin Superintendent of Schools Herbert Grover will be present for liftoff at 10 a.m. on Monday, May 11. There is even a possibility that President George Bush may drop in.

Ham Radio? Of Course!

Of course, no flight would be possible without communications. What began with a request from the school students for a way of "talking" became a complex network of Amateur Radio communications. Amateur Radio operators will provide those communications, using FM, packet radio, and Amateur television (ATV). AEA Weather FAX will be used at Main School, the designated weather center for Mission Control.

Frederick Prehn, WX9W, is coordinating the communications part of Dream Flight Wausau, under auspices of the Wisconsin Valley Amateur Radio Association.

With thirteen elementary schools, the Apollo Condor, and Mission Control all needing a "communications center," working out the logistics and equipment needs and the installations is not a small job! Finding volunteer ham operators who can devote the necessary time (lots of it) isn't

easy either, but Frederick and the WVRA have done it, with more than 35 hams who have volunteered their vacation time from May 11 to 18 for the project.

Ham radio operation in support of the project will be from from "liftoff" on Monday, May 11 at 6:30 a.m. to "landing" at 4:30 p.m. "Flights" will take place daily for six days, with a different crew of 28 on each flight.

Most communications for the sixth-graders' shuttle will take place on the 146.64 and 444.1 repeaters, while logistical and support communications for the hams will be on the Rib Mountain Repeater Association's 146.82 repeater. Packet radio on 145.03 MHz will be used between the sites, too, and amateur television will be used from the Apollo Condor and relayed to the outlying schools through an ATV repeater on Rib Mountain. The local cable television company will relay the ATV signals on cable channel 29 to the schools in Wausau which are equipped for cable TV. Of course, Wausau residents who have cable TV service will be able to watch, too.

Contacts are planned with the Amateur Radio station on board the Russian space station MIR, following correspondence and coordination with Leo Labutin, UA3CR, in Moscow.

An early "bonus" of the project is eight new sixth-graders who have become radio amateurs under the "Kenwood Kids" program. The WVRA held classes for all the communicators in January and February. Undoubtedly, more new, young hams will follow.

The Wausau School District would like to make this an annual event. But WX9W suggests, after hundreds of hours of work finding equipment and volunteers to install and operate that equipment, "Let's get this mission completed first!"

Special Event Station Scheduled

During the period of Dream Flight Wausau, Special Event Station W9SM will operate on 10 and 20 meters. Look for the station on 14.275 and 28.400 MHz from 9 a.m. to 2:30 p.m. CDT May 11 through 15 and on May 18.

Acknowledgements

Without the generous help of a number of manufacturers and suppliers, a project of this size would not be possible. WX9W and WVRA extend their sincere thanks to:

AEA Belden Amphenol
Kenwood Comet

and to many Wausau-area companies for their support. □

Thanks to Frederick Prehn, WX9W, and Mike Schoenfuss, N9GHZ, for providing information used in this story. WX9W also gave timely help with last-minute details and editing. □

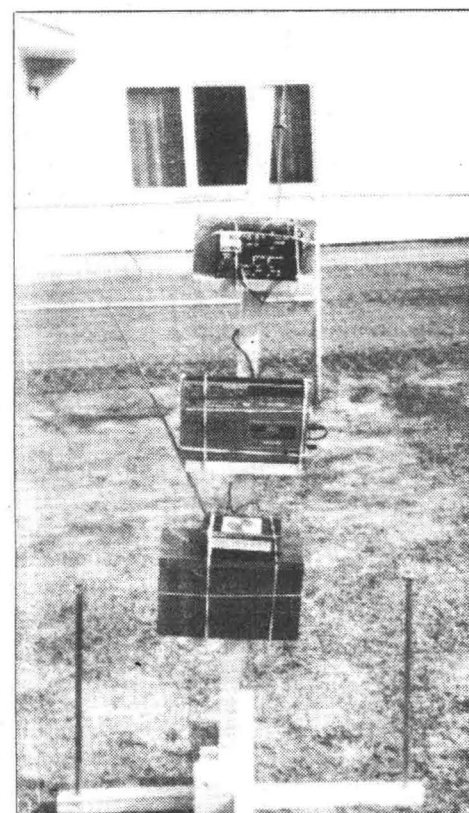
Abbotsford Students Take Part in NASA Shuttle Experiment "INSPIRE"

P.O. Box 401
Abbotsford, WI 54405-0401

Abbotsford High School students in LaVerne Harrison's Physics class and in Jerry Williams' 5th-period Introduction to Technology class recently participated in a NASA-sponsored experiment called INSPIRE (Interactive NASA Space Physics Ionosphere Radio Experiments). It was one of a package of fourteen experiments conducted from the payload bay of space shuttle Atlantis on its recently-completed mission.

The Atlantis mission was the first in a series of ten missions spanning the next decade, and dubbed ATLAS, for Atmospheric Laboratory for Applications and Science. The purpose of the ATLAS program is to investigate how Earth's middle and upper atmosphere and climate are affected by both the sun and by by-products of industrial and agricultural activities on Earth.

The specific experiment in which Project INSPIRE was involved was SEPAC (Space Experiments with Particle Accelerators.) The experiment involved the use of an electron beam accelerator (EBA) to inject an electron beam with a maximum power of 7,750 watts into the Earth's atmosphere. The SEPAC experiment package also included a plasma contactor, neutral gas ejector, beam monitor television, photometer, energetic particle analyzer, plasma probes, and plasma wave detectors.



This is the final configuration used for the Project INSPIRE hardware. The wooden stand was built by Marc Winzenried, WA9ZCO, Dorchester. Mounted on the stand, from top to bottom, are a 6-foot telescoping whip antenna, the VLF radio receiver, a cassette tape recorder, a Radio Shack WWV receiver for recording time markers on the tape recordings, a speaker for monitoring signals, and the ground rods for grounding the VLF receiver.



Jay Braun holds the circuit board of a VLF radio receiver while Jason Reis solders a component in place, as other members of LaVerne Harrison's Physics class at Abbotsford High School look on. The receiver was to be used as part of a NASA experiment being operated from space shuttle Atlantis.

- Photos by Mike Schoenfuss/N9GHZ

The plasma contactor produces a xenon plasma which was used to clamp Atlantis' electrical potential to the plasma potential, allowing a full 1.8 amperes of electron current to be ejected from the EBA. The neutral gas injector ejects xenon into the ionosphere.

The goal of Project INSPIRE was to assist the Atlantis science team in determining the ground "footprint" of the radio waves that are generated by the EBA and travel from space to the Earth. This was to be done by establishing a geographically diverse network of VLF (very low frequency) radio receivers across the United States, and operated by groups of high school students. The receivers were to be used to determine where on the Earth's surface the signals can be detected and, from the data, the effects of the Earth's magnetic field and the ionosphere on the transmitted electromagnetic waves.

Abbotsford High School students were assisted with this project by Mike Schoenfuss, N9GHZ, Abbotsford, and Mike Winzenried, WA9ZCO, Dorchester. Mike

first learned about INSPIRE from an article appearing in *QST* magazine.

The first step was to assemble and test the VLF receivers from kits that were purchased by Mike. After the Atlantis mission was completed, the kits were turned over to and became the property of the school, along with some other required hardware. There is a good possibility that there will be similar space physics radio wave experiments on future shuttle missions, and on Space Station Freedom after it becomes operational. Future school classes will also have an opportunity to participate in these investigations. The receivers can also be used to study natural radio waves, most of which are generated by lightning.

The second phase of the project involved locating a "quiet site" and testing data-taking procedures. In order to obtain useable SEPAC data, a location had to be found that was approximately 500 years from the nearest power lines, since the 60

Please turn to page 13

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Meeting Minutes April 8, 1992

The meeting was called to order by our President, Art, N9BCA, at 19:30 hours, local time. 18 members and guests were present and, the roll is as follows:

N9BCA	Art Wysocki
KA9ACE	Jim Benak
KE9MA	Gene Kroll
KF9FI	John Kinney
N9EIL	Debbie Kroll
KF9FI/XYL	Linda Kinney
KF9HQ	Russ Fritz
WD9JID	Mike Eiden
KE9IA	Gordon Miller
KA9FAS	Mary Eiden
NE9U	Scott Jasper
KA9LAQ	Mike Pagel
WB9UMU	Charlie Miller
N9CGV	Joe Omerik
W9BCC	Frank Guth
N9NOG	Joann Dix
N9JQU	Dave Olson
KF9BG	Ray Dix

The first item on the agenda was Field Day with Russ, KF9HQ, bringing the group up to date on the new site. Our Field Day site for this year will be the Little Plover River Park located just off Hoover Road, across from the Plover/Whiting School. He has reserved the dates of June 26-29 for our group so we will have plenty of time to set up and take down the site. Also, the deposit fee was waived for our group thanks to Russ' pitch on Amateur Radio and Field Day.

We will have to make sure that we leave the park in as good (perhaps even better) shape than we found it so as not to betray this gesture of good will. We will have to provide our own security for the site, and a sheet will be drawn up to make sure that there will be an ADULT on the premises at all times.

W9BCC, Frank, then gave us an update on the progress of H.R. 73, the Amateur Radio Frequency Protection Act, and encouraged all present to write our representatives and urge them to sign on to this bill.

Art, N9BCA, reported on the progress of our upcoming Swapfest and the status of commercial vendors. He also put

out a feeler for ideas for door and ham prizes.

With the old business behind us, we moved on to new business.

Russ, KF9HQ, put out a request for an owners manual for a Gorilla Banana printer to use with his computer. Anyone with this info should contact him so he can get it up and running.

N9JQU, Dave, reminded us that the Wisconsin State Special Olympics are going to be held in Stevens Point again this year on June 4, 5, and 6. Many hands are needed to make this run smoothly, and all volunteers will be welcome - you don't have to be a member of C.W.R.A. to participate. If you don't have your own 2-meter gear, we can still use you. To volunteer, call Dave at (715) 341-8353, or you can sometimes find him on the local repeater or on packet.

Mike, KA9LAQ, reported that he has the new callbooks at his office and that they will be finding their way to the club station shortly. This is the last year that the University can help us out with them, so next year the club will have to buy them.

NE9U, Scott, gave a rundown of the situation with WISTE-1, and proposed we upgrade the radio with one with a good receiver section and more output so that we can serve as a reliable link with the nodes in the western part of the state. His proposal was passed, and by this writing, there should be an Alinco DR110T happily packeting away in the heart of WISTE-1.

Art, N9BCA, asked for some volunteers to serve on a committee to acquire a door prize(s) for the Swapfest. Any volunteers?

Lastly, we will be holding an election at the May meeting to fill the office of vice-president, which was recently vacated. The term will only be until we hold general elections in September, so come prepared to nominate yourself and vote.

The May meeting will be on the 13th in room A109 of the UW-SP Science Building at 7:30 p.m. The program will be a demonstration of Gordon's (KE9IA) morse code program that sends what you type - in Russian. Should be interesting. See you there.

73 de KA9ACE

Northern Wisconsin Radio Club

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Steve Hart, KA9OMC, Secretary

Route 1, Box 54 • Knapp, WI 54749

Due to wet weather, the tour of the WMEQ towers at Menomonie will likely be postponed.

A fall banquet is being considered,

and we will also be mailing a roster and a copy of the constitution to members.

Steve Hart, KA9OMC, Secretary

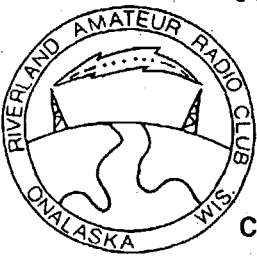
MFJ Helps Link Former Soviet States Together

MFJ Enterprises proudly announces the donation of MFJ-1278 Multimode Data Controllers to the Russian Amateur Radio Emergency Service. The MFJ-1278s will be used to set up an Amateur Emergency Network based in the R3A station inside the Russian Parliament Building to link the former Soviet states together.

The units were shipped to Rick Palm

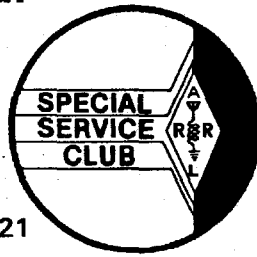
of the ARRL, who coordinated the shipment of equipment. The MFJ-1278 Multimode Data Controllers will transmit and receive Packet, FAX, and other digital modes. For more information about the MFJ-1278 Multimode Data Controller, please call (601) 323-5869, or simply write to MFJ Enterprises, Inc., P.O. Box 494, Mississippi State, MS 39762. □

Riverland Amateur Radio Club



Dick Low, K0JYB,
Secretary

Club mail address: P.O. Box 621
Onalaska, WI 54650



Meeting Minutes April 7, 1992

The April meeting of the Riverland Amateur Club was called to order by President Walt, AA9AW, at 7:10 p.m.

Visitors and members of the RARC were asked to introduce themselves.

The minutes of the last meeting were read by Secretary Dick, K0JYB. Two corrections were made, and the minutes were accepted as corrected.

The treasurer's report was given by Duane, W9HWQ, and accepted as read.

COMMITTEE REPORTS

Van, WA9FIO, our Technical committee chairman, distributed a report describing an audio delay board available from Advanced Computer Controls for the repeater which would:

- Permit complete muting of the DTMF signals.
- Add a 75 msec delay to the re-transmitted audio, which would eliminate the "squell tail" heard over the repeater at key up time.
- Only the courtesy tone will be heard.

The cost is \$165 plus shipping. Van made a motion that we purchase the audio delay board, and Karl, W4ST, seconded the motion. Motion carried.

Trailer Committee chairman Kent, W9LZQ, informed us that the trailer brakes need repairing and it will be taken care of.

Experienced HF operators are being sought to assist with a "very special" event station, planned for Independence Day, July 4, 1992, from 1700Z to 0500Z. The station will be operated from the Highland Veterans Memorial Park, located two and a half miles west of Neilsville, WI. The RARC is invited to participate, and they are particularly interested in our communications trailer for use as a shelter and to house operators in the event of rain. An article regarding the event appears on page nine in the [April] BSSS. Contact Dick, K0JYB, if you are interested in participating.

Field Day Chairman Bill, KE9XQ, made a motion that we hold Field Day at the Jostad farm, or at a similar location if Jostad's place is not available. Motion seconded by Van. Motion carried.

President Walt, AA9AW, informed us that we have rented a Post Office box in Onalaska. The P.O. box number is 621, ZIP 54650.

SkyWarn Chairman Kent, W9LZQ, reported that the Skywarn meeting was very well attended and very informative.

The ad hoc committee consisting of Kent, W9LZQ, as chairman, Jim, N9DBK, Lorin, WA9TQJ, and Bruce, K9CUT, met to discuss what we are going to do in the next few years and how we are going to accomplish our goals.

They came up with a long range objective to meet a variety of special interests represented in the club thru club-sponsored special-interest groups. It might be possible to get off the ground right away as follows:

1. Linking repeaters
2. An Ambassador group to attend other nearby clubs in the area and act as liaisons.
3. DF-ing
4. Dubna group (Ham Radio)

Kent moved that the club president appoint a coordinator for the special interest groups and that person would be a club liaison, providing input to the club as to what is going on in those groups. Also, the groups could give reports to the club. Feroz, WU9N, seconded the motion. Motion carried.

Feroz, WU9N, moved that we extend the meeting, seconded by Bill, KE9XQ. Motion carried.

NEW BUSINESS

A motion was made and seconded that in the class of new hams, each student who has attended one meeting of the class and passes the exam, or any student attending four meetings of the class, gets a free membership in the RARC for the balance of the year. Motion carried.

Kent, W9LZQ, announced that there will be a Packet meeting Saturday, April 11, 1992, at the Cartwright Center UWL at 9:30 a.m. Don, KS9F, will speak on satellite communication, and Van, WA9FIO, will talk on TNC/Node settings.

Judy, N9LGV, reported that the RARC swapfest will be held on Nov. 11, 1992, at the Onalaska Community Center.

A discussion was held regarding insurance coverage for the ARES group participating in Skywarn activities. A joint policy covering civil defense and ARES might be possible.

Bill, KE9XQ, gave a nice presentation on Spread Spectrum.

The meeting was adjourned at 8:30 p.m.

Submitted by Dick, K0JYB

Our speaker for the evening was Bruce, K9CUT. His subject was Direction Finding or DF-ing. His presentation was interesting and informative, and inspired many of us to get into DF-ing.

Meeting Attendance

Charles Burch	KA9UUK
Judy Williams	N9LGV
Rick Williams	KV9U
Brian McCarty	N9IWP
Gary Webb	NI9V
Duane Fruechte	W9HWQ
Dick Low	K0JYB
Kent Helman	W9LZQ
Walt Altus	AA9AW
Joe Mezera	WA9SOQ
Karl Olberg	W4ST
Bob Selbrede	KA9EZR
Ken Eggen	WA0RBU
Roger Christenson	
Dennis Heifner	N0BKW
Bill Wood	KE9XQ
LaVonne Wood	
Phil Uehling	W9UP
Arthur Osborn	W0JDC
Feroz Ghouse	WU9N
Van Elston	WA9FIO
Mike Warnock	WN9P
Lorin Lewis	W9TQJ
Bruce Bjerstedt	K9CUT
Hugh Barker	KA0EJZ
George Kroner	KE9PL
Mike Tessmer	N0BSH
Scott Neader	KA9FOX
L.F. (Nook) Bentzen	K9EGO
Dallas Miller	K9LEC
Greg A. Miller	KA9FOZ
Bob Wilson	N9LZK
Richard Koebernek	KA9ZZK
Scott Hurd	KB9GCV

Racine Megacycle Club

Arne Moxness, KA9ZPY, Secretary

3345 Newman Road • Racine, WI 53406

Meeting Minutes April 4, 1992

The meeting was started at 7:30 PM by President Brian, WD9FRH. About 35 hams and hams waiting for their licenses were present.

The minutes from the March meeting, as reported in the *Badger State Smoke Signals*, were approved. Treasurer Dave, WB9ZIO, gave his report. Present balance is \$450.18. Last month's balance, as reported in the *BSSS*, was off about \$50.

Cheryl, WS9P, talked about the ham scholarships that are available. She also thanked the club for the cooperation in showing the young potential hams, what radio is about and the displays that were set up by a few in the club.

President Brian, WD9FRH, talked about next month's meeting, when Dennis, WB9SVM, will set up and show his latest contest logging programs on his computer. This program will be used at the Field Day, and everyone is asked to attend and learn how to use it. He said he will try to set up more than one computer for this evening's program, so several hams can practice.

President Brian also mentioned that Jim, KB9CCY, has everything in order for the Field Day. There was some discussion about the purchase of the food shelter or tent. It may be used for the Novice radio station also.

President Brian brought the Picnic up for discussion. We will most likely end up with one picnic in July at the QTH of

Dick, W5ONL, like last year, and another one in August at Decison Farm on 6 Mile Road. The owner, who is a ham, has an open invitation for us to use it for a picnic. He will be contacted about the date.

President Brian informed that the club most likely will be involved in a Racine Hamfest in February 1993. Dave, WB9USI, has started the ball rolling. More information will come later.

President Brian brought up for discussion the possibility of the club sponsoring a packet node. It would cover the Racine/Kenosha area and would be tied into the "back bone" by links. The Packet leaders like Dennis, WB9SVM, and Bruce, K9RRS, will look into the possibility by forming a committee. Dennis and Bruce explained some of the problems with the node and how it could work. The packet group, which now meets regularly, is a Racine Megacycle Club sponsored club, and meets other Mondays once a month. Anyone interested please contact Bruce, K9RRS, who runs the informal meetings now.

There was also discussion about Corky's repeater, which now is for sale. The packet group will look into the possibility of purchasing it, but there are many problems involved.

The meeting was adjourned at 8:30 PM, after which the auction was held by President Brian. Most of the items were sold, and most of the hams gathered at the same restaurant for coffee.

Respectfully submitted:
Arne, KA9ZPY, Secretary

Calendar

Courtesy of the Racine Megacycle Club

May

- 11 Megacycle Club meeting
- 17 Hamfest at Peotone

June

- 6 Testing at Red Cross
- 7 Hamfest at Princeton
- 8 Megacycle Club Meeting
- 12 Air Show at Racine
- 13 Air Show at Racine
- 13 Lighthouse Run
- 14 Air Show at Racine
- 14 Hamfest at Willow Springs
- 27 Field Day
- 28 Field Day

July

- 11 Hamfest at Oak Creek
- 12 Hamfest at Downers Grove
- 13 Megacycle Club Meeting
- 18 Hamfest at Eau Claire
- 28 Lakeshore Club Meeting

August

- 2 Hamfest at Sugar Grove
- 9 Hamfest at Peotone
- 10 Megacycle Club Meeting

September

- 5 Testing at Red Cross
- 13 Hamfest at Joliet
- 14 Megacycle Club Meeting
- 26 and 27 Hamfest at Grayslake

Computer

By Rich Regent, K9GDF
5003 South 26th Street



Tips

Milwaukee, WI 53221

PRINTER CABLE PROBLEMS

Q. My printer doesn't print some programs, but it does others. Windows only prints on port LPT1.OS2, Formtool on port PRN and DOS Print Scrn works. MetaStock doesn't print and gives the screen error message: "Check that printer is on, paper is in, ready light is on." These programs print on port LPT1 on other computers. My friend let me use his printer and they did not print with his

A. Your computer is not communicating with your printer through the standard port LPT1. The tests eliminated everything except the printer cable. You have a parallel printer cable, while the programs are looking for a Centronics printer cable. Although these cables look alike and cost the same, they have a few pins wired differently. Try a Centronics printer cable and reconfigure your programs for port LPT1. They should then print.

Mancorad Radio Club

Lou Maylander, KA9ZQF, Secretary

P.O. Box 204 • Manitowoc, WI 54221-0204

General Meeting April 8, 1992

OLD BUSINESS

1. **Treasurer's report:** Treasurer George, N9BCX, absent; no report given.

2. **Secretary's report:** accepted as read.

3. **Hamfest:** Ron, WS9X, reported that he has gotten numerous prizes from many companies. Ron, WS9X, also has sign-up sheets for the numerous volunteer jobs needed to be filled during the Hamfest. Secretary Lou, KA9ZQF, reported that posters are up in Two Rivers and Manitowoc. Brats have been secured at \$1.33 per pound, the tickets have been stamped and purchased, and licenses have been applied for. Ron, WS9X, suggested that two Savings Bonds of \$25 and \$50 be purchased and awarded as door prizes. Motion made, seconded, and passed to purchase said. (Forty-eight tables purchased as of this writing.)

4. **Banquet:** There will be a banquet following the Hamfest at Kasper's Restaurant on Memorial Drive. Cost will be approximately \$8.00 per individual with tax and tip. The meal will be family style chicken and ribs, and start about 6 p.m. Reservations in *advance only* by contacting Treasurer George, N9BCX.

5. **Car Ferry Special Event:** President John, WB9ESM, absent, and no other report given.

6. **Emergency Vehicle Registration:** Numerous options explored. (A) Keep registration as is. (B) Purchase "Collector's Plate" at \$194 once with a \$5 waiver which allows us to drive the vehicle in January. Reportedly, this \$5 fee is returnable. (C) President John, WB9ESM, had contacted the mayor, and an arrangement was made to sell the vehicle to the city with the club writing the agreement for its use, storage, and repair, and leasing it back to the club. Discussion followed regarding changes in insurance; weight limits with each option; and limitations regarding usage. "Red", N9GHE, made a motion to further the investigation into the purchase of a "Collector's Plate" for the vehicle. Motion seconded by Ken, WB9OBX, and Whitey, WW9P. Motion passed unanimously.

7. **Fly-In Special Event:** Vice-President Chuck, N9KGL, reported that the event will be on the 14th of June. The local chapter of the EAA (#383) have requested that the club lend a hand with ground communications. Vice-President Chuck, N9KGL, reported that the Emergency Vehicle will be in use to make contacts, however the antenna mast height will be limited to the height of surrounding buildings. Chuck suggested that this not be advertised as a large Special Event, but some contacts will be made. There is the possibility of post cards from the EAA, and in-flight contacts. FAA regs prohibit external antennas; so all antennas will be internal.

8. **Cobia Submarine Special Event:** Vice-President Chuck, N9KGL, reported that there will be no "Maritime Days" this year, however has a list of dates for the Sub Special Event. The Club chose August 22-23 as the date. Chuck also reported that they have given us permission to put up another antenna. (More information to follow, fellow paper-chasers!)

9. **R.A.C.E.S. Drill:** Howard, KE9YD, R.A.C.E.S. Coordinator, reported that the Nuclear Disaster Drill that took place on March 17, in conjunction with Emergency Government, went well. Howard, KE9YD, read a letter of commendation from Nancy Crowley, Director of Manitowoc County Emergency Government.

NEW BUSINESS

1. **Upcoming Parades:** Discussion regarding the placing of the Emergency Vehicle in the Two Rivers Snowfest Parade in the end of June, and the Manitowoc Memorial Day Parade. Questions arose as to if the Snowfest Parade will conflict with Field Day. The particulars of both events will be brought up in the next General Meeting of the club.

2. **Tornado Awareness Day:** Vice-President Chuck, N9KGL, reminded members that tomorrow is Tornado Awareness Day. He suggested that all club members have their 2-meter HTs handy, and on the club repeater frequency, just in case a net is called for.

3. **Club Inventory:** Vice-President Chuck, N9KGL, reminded the membership that they must bring in club equipment to be inventoried. The equipment can be taken out again as soon as sign-out form is completed.

4. **Use of Club Call Letters W9DK:** Carl, KA9ZTF, reported that the club call should not be used during a drill. He suggested the use of one's own call sign. Howard, KE9YD, R.A.C.E.S. Coordinator, and Eric, WD9IAB, agreed.

5. **Donation to the club:** The Lakeshore Disaster Group from Cleveland donated \$50 to the club, asking that some time in the near future we bring the Emergency Vehicle with its equipment to one of their meetings.

6. **Membership Application:** Dennis Meneau's (Clancy, KB9ECW's, son) application for membership was given its first reading. Motion to accept was unanimous. Second reading will be at the next General Meeting. Dennis has no call sign at this time.

7. **Spare Parts Emergency Vehicles:** Howard, KE9YD, R.A.C.E.S. Coordinator, requested that the club try to get the three other vehicles used as spare parts for the Emergency Vehicle off his place of business property. Vice-President Chuck, N9KGL, reported that he will check into it.

Submitted for approval:
Lou Maylander, KA9ZQF,
Mancorad Radio Club Secretary

Taylor County Area Amateur Radio Club

Mike Schoenfuss, N9GHZ, Secretary

Abbotsford, WI 54405-0401

Taylor County Area Amateur Radio Club Meeting Annoucement

The next regular meeting will be held on Thursday, May 14 at 7 p.m. in the Emergency Government meeting room/Red

sheriff's annex to the Taylor County Courthouse, corner of 2nd and Ogden Streets, Medford, WI. Talk-in on 147.75-/147.15 repeater. Following the business meeting, time permitting, a severe weather

Continued from front page

The crew signed the call N5WQC, and downlinked primarily on 145.55 MHz. Uplink frequencies while flying over ITU Region 2 were 144.91, 144.95, and 144.97 MHz.

Four of the seven STS-45 astronauts were licensed radio amateurs. They were Mission Specialist David Leestma, N5WQC, whose call sign was used during the mission; Pilot Brian Duffy, N5WQW; Belgian Payload Specialist Dirk Frimout, OA1AFD; and Mission Specialist Kathy Sullivan, N5YYY. Waivers of the FCC requirement of an Extra Class license for operation from space were granted by the FCC for all licensed radio amateurs flying on Atlantis, including Frimout.

The S.T.A.

Special temporary third-party agreements for the duration of the flight were made between the United States, Belgium, and Norway. This permitted the exchange of messages between the shuttle and authorized stations in those countries. In the case of Belgium, operational permits were limited to students at its Euro Space Center.

School Contacts

While there were many opportunities for individual voice contacts, the main highlights were the QSOs between the shuttle and various schools worldwide. The one that will probably be remembered most by astronaut Brian Duffy occurred from Ed White Elementary School in Houston, Texas, where all 8 children were able to ask the astro-hams a question. The big treat for Duffy was hearing directly from his son Scott that he had just passed his Technician license exam "just for him." While there wasn't any downlinked NASA Select video of this particular contact as planned, the media coverage by ABC, NBC, and CBS made up for it.

Another excellent contact took place March 29, when hams belonging to the Marshall Space Flight Center ARC made

contact with Atlantis/STS-45. What made this QSO unique was that the very first ham to operate from space, Owen Garriott, W5LFL, initiated the contact and five students with him asked questions of the astronaut. The best part about this contact, from a publicity standpoint, was that they carried live NASA Select video of SAREX on the flight deck while the students were talking to Charles Bolden. This contact received major news coverage from various news services covering the flight from Huntsville.

Contacts with a number of other schools in other countries and the U.S. were made, including Indianola Junior and Senior High Schools in Indianola, Iowa.

Atlantis to MIR

The astronaut-hams on Atlantis also tried once again to make ham radio history at 1048 UTC on 3/25, when they made their first attempt on this flight to make direct two-way radio contact with cosmonauts aboard the Russian Space Station MIR. The contact was to have occurred above Moscow, when it was hoped that the orbital paths of the two spacecrafts would be close enough to establish "line of sight" communications. Unfortunately, the signals were far from Q5, and no contact is considered to have happened.

SAREX Over Hawaii

On Thursday afternoon, March 26, the shuttle began a pass over the island of Oahu. Dr. Kathy Sullivan was at the mike, and gave good signal reports to several stations. Jim Putnam, WA5SKK, heard her on his half-wave antenna. He reported that the signal was not full quieting, but was easily readable. All stations uplinked on 144.95, though a few were calling at the start of the pass on .91 and .97.

- Condensed from
Westlink Report, 4/13/92

Did you work STS-45? If so, please let BSSS know. We'd like to share your success with our readers. Send the info to the editor; see page 2 for the address. Thanks! □

can even check the SWR on the input of your linear amplifier, or pretune your antenna tuner without even switching on your transceiver!

The handheld MFJ-247 is fully self-contained; you can use it anywhere. It's ideal for setting antennas to exact frequencies right on the roof or tower. There's no need to even switch on your transceiver until all antenna work is complete! Further, this unit's large LCD readout can be viewed in direct sunlight!

The MFJ-247 is super easy to use. You simply plug in your antenna to its top SO-239 socket, set the MFJ-247's readout to the frequency you wish to operate, and read the SWR directly on its meter. You can then shorten or lengthen your antenna's element(s) or mobile whip for lowest SWR at your desired frequency, tune to band edges, and read bandwidth of the antenna, and more. Tuning couldn't be easier! The unit reads SWR directly from 160-10 meters. It also reads frequencies with high accuracy to 150 MHz.

The MFJ-247 consists of a precise digital frequency counter, plus a low-power signal generator and an SWR meter in one cabinet. Its weak signal on your selected frequency is fed to the antenna, then the antenna's SWR is read directly on the MFJ SWR Analyzer's meter. This concept is ten times better than using a noise bridge!

The revolutionary MFJ-247 has a separate BNC input connector for use as a high-accuracy frequency counter. The counter has one PPM accuracy. The unit uses six AA cells, or 110 VAC with the MFJ-1312 (\$12.95).

For more information, or to order, contact any MFJ dealer, or MFJ Enterprises, Inc., P.O. Box 494, Mississippi State, MS 39762, or call (601) 323-5869, FAX (601) 323-6551, TELEX (601) 323-6551, or order toll-free at (800) 647-1800.

- MFJ news release

Eau Claire Amateur Radio Club

Don Franzmann, W9NFJ, Secretary

2728 Marilyn Drive • Eau Claire, WI 54701

Meeting Minutes April 14, 1992

The formal business meeting was preceded by the scheduled program. A SkyWarn presentation was made by Bob Adams, KC0JJ, assisted by Dave Floyd, KB0CIE, and Rich Bann, KA0BZK, all of the Minneapolis-St. Paul Metro SkyWarn program. The presentation consisted of slides, supplemented with video tape. It proved to be extremely informative and interesting, allowing members to update their skills in spotting tornadoes, and providing them with an opportunity to have their questions answered by knowledgeable people with substantial experience in this area.

Following the program, the business meeting was called to order by President Bill Jablonske, W9NNS, at 8:56 p.m. The secretary's and treasurer's reports were approved as published and read.

President Jablonske read a letter inviting the club members to participate in a forthcoming Amateur Radio demonstration event, to be part of a celebration at Wisconsin's Veterans Memorial Park near Neillsville on July 4th. After a brief discussion, it was agreed that the matter be deferred until after our May meeting. A related discussion ensued regarding the status of the club's trailer, resulting in actions to update information on title, insurance, and licensing provisions.

Joe, KB9R, a member of the Repeater Assessment Committee, stated that

a new controller and antenna had been purchased and received. It is expected that the new controller will be in operation within two weeks, with the antenna installation being dependent upon the availability of the antenna crew. It was noted that donations to this project have been made by only 3% of the club's membership. We ask that each of you give thought to supporting this project so that we may continue to upgrade our system.

A motion was approved designating that \$20.00 be sent to Bob Adams, along with an expression of thanks, for this evening's program. The secretary was also authorized to notify Marlin Hostvet, last month's program, that he and one guest would be admitted to the club's forthcoming hamfest free of charge.

Further discussion centered on the hamfest, scheduled for July 18. Members requiring personal tables were urged to sign up for them early. Total tables available will increase from 90 to 130, with a large outdoor area under cover also available.

The lunch committee for next month is Fred, KC9NN, and Bob, W9BUG.

The meeting was adjourned at 9:44 p.m.

Respectfully submitted:

Don Franzmann, W9NFJ, Secretary

Attention Participating Clubs

PLEASE send your club's material to BSSS NO LATER than FIVE days after your club's meeting. Thanks!

Abbotsford Students Take Part in NASA Experiment

Continued from page 10

Hz alternating current carried in those lines interferes with the receivers. The location also had to be in an open area, such as a field, or on a hilltop or small rise. A standard audio cassette tape recorder was incorporated to record transmissions.

Unfortunately, due to electrical problems that developed on the shuttle shortly after the mission got underway, the specific SEPAC experiment involving Project INSPIRE had to be scrubbed.

A backup plan was put into effect which involved using the VLF receivers to record natural VLF radio signals over a period of four days, during the early morning hours. Following completion of the recording activities, the tapes were sent to NASA, along with written logs. The data will be analyzed and reports, including spectrograms, will be returned to the participating student groups.

While the failure of the SEPAC experiment hardware was disappointing, the students involved did gain experience and knowledge in the assembling of an electronics kit, including proper soldering techniques, electronic components, and basic electronic theory, and radio wave theory.

Students in LaVerne Harrison's Physics class taking part in the INSPIRE project were Cami Grube, Kara Melvin, Tiffany Gonshorowski, Amy Ruesch, Jenny Hardrath, Jonalee Kommer, Jason Reis, Jay Braun, and Kevin Quarne. Students in Jerry Williams' Introduction to Technology class taking part were Matt Drabek, Brad Ingersoll, Corey Steen, Scott Christensen, John Lamont, Ryan LaSee, Chris Tesmer, Matt Anderson, Matt Burdick, Bryan Pfalzgraf, Adam Viegut, Brice Faulkner, and Kevin Quarne. □

Kuwait Honors Hams

Continued from front page

which operated from the ceremony grounds of the celebration throughout the week.

Ward, Moore, and the others also toured an exhibition site where military equipment abandoned by retreating Iraqi forces was staged for viewing.

On Friday, February 28, an awards ceremony was held at the headquarters of the Kuwaiti Amateur Radio Society, hosted by the Kuwait minister of defense and the director of the Amateur Radio society, who also serves as a United Nations representative of Kuwait. The ceremony recognized the efforts of all the ham radio operators who "diligently kept health and welfare traffic flowing to and from Kuwait as well as providing crucial information to various governments during the occupation."

"The Kuwaiti people were fantastic hosts," Ward said. "The highlight of the trip for me was finally meeting personally Abdul Jabbar Marafi, 9K2DZ, for whom I was able to provide the crucial close-in link for his transmissions."

"Meeting this man, who risked his own life as well as his family's to make radio transmissions from an occupied country, was the dream of a lifetime."

- The ARRL Letter, 3/24/92

Equipment for Sale

The following equipment is from the estate of John Young, W9KAZ, and is for sale. Prices are negotiable.

1 - Drake L4B linear amplifier/ L4DS power supply	\$650.00
1 - Drake MN-2000 matchbox	\$200.00
1 - Johnson 1 KW matchbox antenna tuner	\$149.00
1 - Johnson 250 watt matchbox antenna tuner	\$69.00
1 - Mosley TA-33 tri-band beam	\$150.00
1 - Astatic D-140 mike	\$40.00

Contact Bruce Bjerstedt, K9CUT, 335 So. 22nd St., La Crosse, WI 54601. Call (608) 782-4349 between 5 p.m. and 6:15 p.m.

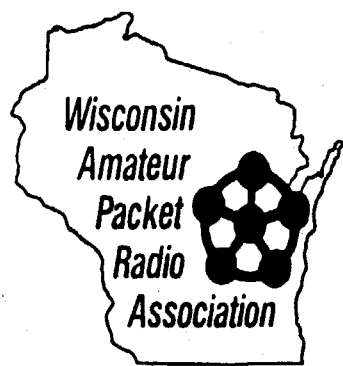
New Products



MFJ-247 Multi-Purpose
Antenna Tuning Instrument

MFJ Enterprises, Inc. announces a new super multi-purpose instrument for tuning mobile and home antennas alike.

Priced at just \$189.95, the new MFJ-247 is your perfect answer for "quick and easy" tuning of HF beams, verticals, dipoles, and mobile antennas for lowest SWR at your desired frequency. This fully self-contained unit shows your antenna's SWR over the entire band, and works without a transceiver, SWR bridge, or other additional equipment! You can see SWR change while rotating your beam, effects of ice and snow, changes on mobile whips while moving, and much more. You



THE WISCONSIN PACKETEER

Wisconsin Amateur Packet Radio Association (WAPR)

William Schroeder, W9ZBD

4247 Forest Point Drive • Rhinelander, WI 54501

Steve Loeffler, WB9ZRE, Editor, 123 W. Oshkosh St., Ripon, WI 54971

RiverLAN Packet Conference

On Saturday 4/11 the annual RiverLAN Packet Conference was held in La Crosse, WI at the University of Wisconsin - La Crosse. The following is a summary of program highlights:

Don Elsner - KS9F presented an informational session on amateur satellites, including special emphasis on packet satellites. His presentation included a description of the various amateur birds, discussion of software available for communication/tracking/telemetry, and description of hardware needed to get started with satellite communication.

Van Elston - WA9FIO gave a presentation on NODE parameters and TNC settings. He noted the discussion about the congestion on 145.01 and how many NODEs are contributing to the congestion through nodes broadcasts of large, irrelevant node lists. He advocates locking in only immediate neighbor nodes and reducing ERP of any node to be effective only with its immediate neighbors. Effective networking, he explains, requires appropriate settings of nodes and fine tuning the system for efficiency.

Kent Helman - W9LZQ and Bob Dubke - KOSIR presented a discussion of where we are with backbones in the states of Wisconsin and Minnesota and discussed the Rochester to La Crosse HS link. The plan currently is to run the link from Rochester to St. Charles, MN on 430 Mhz with a switchover to 222 Mhz from there to La Crosse.

The business meeting was held following the presentations where expenses were approved for equipment purchases and new officers were elected for the 92-93 year. The new Chairman is Feroz Ghouse - WU9N and the Secretary-Treasurer is Scott Neader - KA9FOX.

The Association also approved a name change to WISOTA Amateur Networking Association. The name change will not effect the LAN name which remains RiverLAN.

Kent - W9LZQ

Node Resource Management in La Crosse, WI

The following article was presented at the recent WANA (RiverLAN) Conference at La Crosse WI. A presentation was made by its author, Van Elston - WA9FIO on this as well as individual TNC settings for non-NODE TNCs. The information is being reproduced for distribution.

Kent - W9LZQ

In the early days of packet, with our two local nodes, I used to have keyboard QSO's with my pals in the Twin Cities, Rochester, and Madison. I even had a brief QSO with my brother in Pennsylvania through nodes and digi's. This has not been possible for quite a while.

Now, elegant BBS's have taken up the function of forwarding personal correspondence. BBS local messaging works well. However, for long distance work, each BBS has to talk to its neighbor. That is now getting tough. If you have ever gone to an urban center or rural hilltop to work on your node and listened and monitored your sites, the racket is amazing. The collision detection and resend scheme for AX.25 assumed that two stations would occasionally have a transmit collision, and re-send after a pause sequence.

What actually is happening now is that there are 2 to 10 stations transmitting simultaneously, with such informative material as ALLUSA buy/sell, and exhaustive but unconnectable NODE broadcasts and beacons. They get no ACK's, so they re-send, and another layer of collisions occur. Now, connections are poor

between nearby stations, and even the automated, relentless BBS's are getting bogged down.

So, Node sysops, work with your BBS sysops and vice versa. Many of you are the same person, which makes conversation easier. Recently the RiverLAN group met to consider limiting traffic within the local area, including the area BBS, W9LZQ. All were in agreement to limit the propagation of ALLUSA buy/sell messages, and this has been done at the BBS level, with consensus and cooperation. This is amateur radio, not a common carrier or commercial service. Some "flames" have returned for doing so.

This note is to clarify the management of NODES, WILSE/WA9FIO-1 and LZQ2/W9LZQ-2 at Nodine, Minnesota, and WICMY/N9BOE-1 at Tomah, Wisconsin that are under our control, to improve throughput, and manage our resources. I thought you might like to know what we have done, and emulate those NODE functions that will help you too, and send me comments if you wish. As background please read Mark Marston's essay on "To lock or not to lock", in the documentation for TheNet Plus 2.06/2.08.

It is apparent that, going up to the node sites, that the DCD lights on the rigs were constantly on all the time, hearing many stations that they cannot work. Our radios are simple, modern Motorola and Kenwoods, modified to switch fast (70-80 msec either way), and modest power outputs, in the 20-30 watt class, and good antennas at 150 and 50 feet, with cavities. Each of our nodes hears 10 to 30 nodes DIRECTLY, but can only work two or three of their immediate neighbors. I think there are some alligators out there, using significant power, with slow, relay switched TX amplifiers, and weak receiver front ends. My analogy is to the third world megawatt propaganda broadcast transmitter, set up to be heard world wide, to gain attention, but whose audience is local if any, and not well served.

For our TheNet PLUS 2.06's, as an example. I have set ROUTE lists for each to its immediately adjacent neighbor, and set the NODE list to the same, with the recommended Quality factor for RF or wire connections. I have set:

- PARAM 1 to 1 (making the available new entries limited to about 1.)
- PARAM 2 to 255 (new entries would have to be hardwired.)
- PARAM 3 to 192 (WILSE/WICMY node broadcast as normal RF quality.)
- PARAM 7 to 3600 Node broadcast once an hour. (this is not a beacon)
- PARAM 24 to 1 (Validate callsigns)
- PARAM 25 to 0 (disables ALL beacons) this does not disable node info.
- PARAM 29 to ? (this is TXD, experiment and set as fast as possible to just keep down retries, and add 25%) Shoot for under 200 msec. If you have set your TXD to 50 (500 msec), you have reduced your effective baud rate by 50% before you have even sent a packet.

Params 1-7 should be the same for TheNet 1.3 (or very close) This means that the massive primary, secondary and tertiary node lists that these stations hear will NOT be PROPAGATED. Good connections will be sent once per hour. No beacons will be heard, and stations that have slow TX/RX times will have to make some improvements to work these nodes. The answer is not only to work toward higher speed networks, but to improve what we have in place, and quite a bit can be done.

Direct the comments to: Van, WA9FIO @ W9LZQ.WI

Check Your Battery Back-up!

I just wanted to relay an experience I just had with my PK232 TNC which caused quite a scare. Last week I had pulled the unit to take it to a radio club to do a demo. After the demo, when I brought the TNC home and reinstalled it, nothing would work right. The "tune" LED's were lighting randomly, not receiving or decoding any packets. Not transmitting any AFSK tones, etc. I decided to open up the TNC to see if I could see anything wrong inside. The first thing I saw was a few drops of "water" inside the case. I couldn't figure out where water could come from. Although I had the TNC in the car to/from the demo, the trunk doesn't leak and it wasn't raining outside last week. Then I felt the "water" and it felt slippery, but not quite oily. Then I saw the guilty party.

One of the penlight batteries had started leaking and battery "juice" was on the circuit board, causing lots of white "crusty stuff" to form on a few of the IC's and other parts. The corrosion was shorting out several components and generally rendered the unit INOP. This is a condition which requires IMMEDIATE attention. I took the board out of the case and to the kitchen. I immediately got some purified water in a squirt bottle and started squirting it everywhere that I saw corrosion or "battery juice" on the board. Also got an old toothbrush and scrubbed the affected areas. Continued to flush the board with water, tilting it so the water would flow off, for about five minutes. Then I shook out as much water as I could, and then finished drying it with my hair blower.

Although my hopes were not very high when I started out, when I finished, the unit fired right up and worked normally. Of course I think I'll opt to leave the batteries out from now on.

I can wait the few extra seconds it takes for the program to load up once in awhile. Well, at least it works for now. This may have not been the "recommended" way to clean a TNC, but then getting alkaline battery electrolyte on the electronics is not very good either!

Do you know where your batteries are???

Clay - N6VFO

TAPR DCD Kits Still Available

The TAPR DCD State Machine 1.09 kits are still available from TAPR. There are two kits, one without a clock circuit and the other comes with clock circuitry. The cost is \$20 for the non-clock kit and \$25 for the kit with the clock.

This modification kit is highly recommended for TNCs that do not have true Data Carrier Detect. TNCs without DCD require the radio's squelch circuit to determine frequency activity. If the squelch is set too high, weak station cannot be heard. If the squelch is too low, noise can prevent the TNC from keying the radio. The DCD circuit allows the user to open the radio squelch. The circuit will only recognize and pass digital information to the TNC allowing reception of weak signals and allowing the TNC to respond to a call in high noise levels. The kits come complete with printed circuit board, all the parts and complete instructions.

Call TAPR at: 602-749-9479 for further info.

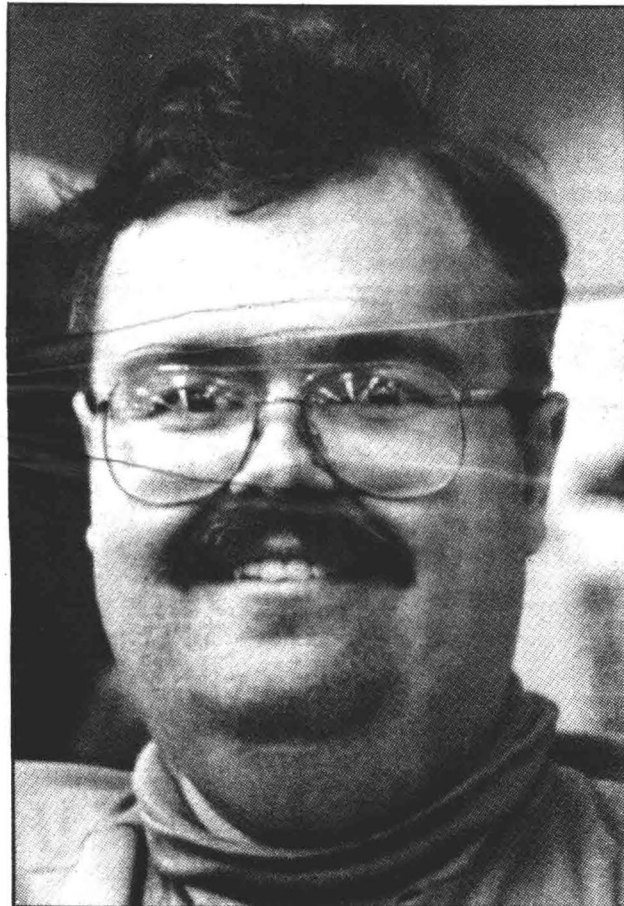
Remember the WAPR meeting in Oak Creek Swapfest on July 11 at 10:30 AM.

(continued on page 3)

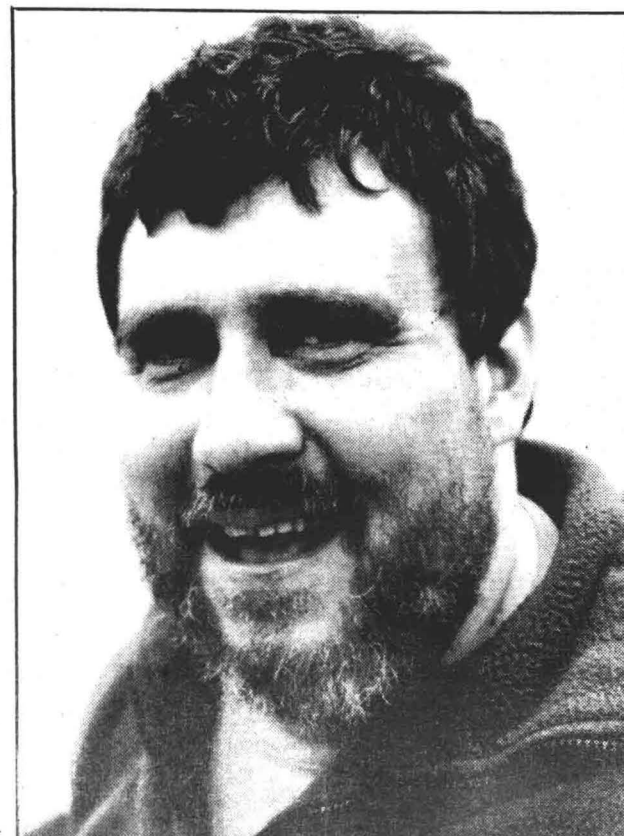
Madison Swapfest Candida



A swapfest is for browsing, selling, buying, trading, and looking over the goodies, as well as good, old fashioned socializing. Here, some of the attendees look over the stock on a vendor's table.



Always amiable on the air and in person, Tony Hagen, WB9OHE, La Farge, WI, enjoyed the swapfest.



Dave Schaefer, N9DMS, uses "Dirty, Musty Socks" as his phonetics. He offered to prove their accuracy to the photographer. The photog politely (wisely?) declined Dave's generous offer.

- K9ZZ photos

Yellow Thunder Amateur Radio Club

Harry Westlund, K9EHJ, Secretary

K9ODK
WB9FDZ

720 Jefferson Street • Baraboo, WI 53913



The April 14, 1992 meeting of the Yellow Thunder Amateur Radio Club was called to order at 7:36 p.m. by the President, Art Kleefisch, W9WSS.

The minutes of the march meeting were approved as published in the BSSS.

James Decker, WB9UQT, gave the Treasurers report.

Duane Grotophorst, KA9HKL, reported that the members of the license classes, namely, John P. McDonauh Jr. and Brian Behnke, have passed their tests and are awaiting their licenses.

Bill Klinkner, N9KXX announced the Boy Scout weekend jamboree of May 16, 1992 and asked for volunteers to set up and operate a demonstration station. Final decisions will be made at the next meeting.

After a discussion on the club license, K9ODK, it was agreed that the trustee of license would be Bob Sauvan, WT9Q, on a motion by L.J. Hemmer, WB9TFJ, and seconded by Bill Klinkner, N9KXX.

James Decker, WB9UQT asked for volunteers for communications at the North Freedom Day celebration.

By unanimous vote, George G. Gabay, was voted in as a member.

With no more business, the club then had an open discussion on the recent MARA swapfest in Madison.

The Buck Nite drawing winner was Beverly Grant, who was not present.

The meeting was adjourned at 8:29 p.m. on a motion by L.J. Hemmer, WB9TFJ, and seconded by Ken Johnson, K9DZG.

Respectfully Submitted,
Harry Westlund, K9EHJ, Secretary.

Greetings from you Activities Director.

The April meeting program was our HF night. The topic of tonight was on HF nets, contesting, DX work, HF antennas, and HF rigs. We had a

panel discussion with Bob Sauvan, WT9Q, Steve Schwoegler, WB9RNL, and Ken Johnson, K9DZG, serving as the Hams of knowledge on hf activities. Also brought out was the HF activities on the big Field Day week end event on June 20 and 21. The YTARC is planning on having 2 CW stations and 3 SSB HF stations on the air. Activity is also planned for 2-meters and above.

The May meeting activity program is our FM night. We will be talking about 6-meters and above. FM, SSB and packet will be discussed. We will have a Service Monitor, Wattmeters, and related test equipment to check out your HT or mobile radio and antenna. Bring your questions and your HTs.

73, Bill Klinkner, N9KXX

The following members and guests were present for the meeting:

Anne Klinkner	Prairie du Sac
Art Kleefisch, W9WSS	Baraboo
Bill Klinkner, N9KXX	Prairie du Sac
Bob Sauvan, WT9Q	Sauk City
Charles E. Tilton, N9MMF	Baraboo
Duane Grotophorst, KA9HKL	Loganville
George G. Gabay	New Lisbon
Harold Reif, KA9YQP	Baraboo
Harry Mayland, K9FFT	Baraboo
Harry Westlund, K9EHJ	Baraboo
Harvey Behnke	Baraboo
Jack Kirner, N9LKZ	Prairie du Sac
Jim Decker, WB9UQT	Baraboo
John Baesemann	Portage
Ken Johnson, K9DZG	Mazomanie
Kevin Perry, N9LME	Prairie du Sac
L.J. Hemmer, WB9TFJ	Baraboo
Marvin Kaiser	Wisconsin Dells
Raymond Matlosz, N9MLZ	Reedsburg
Rhobert Hemmer, N9LXX	Baraboo
Steve R. Schwoegler, WB9RNL	Wisconsin Dells
Sylvia Hoenstein	Adams
Tom Thomson, N9LLF	Sauk City

Taylor County Area Amateur Radio Club

Continued from page 12

training video will be shown and, if access is available to the Taylor County EOC, a tour and explanation of the equipment located there will be given.

Excerpts from Minutes of April 9, 1992 Meeting

Meeting was called to order by President N9GEN. Present were N9GHZ (Abbotsford), WD9FWP (Dorchester), N9LIE and N9LHY (Sheldon), W9LEE (Westboro), KE4FE (Rib Lake), and N9GEN, N9FZD, and W9QHI (Medford).

Minutes of last month's meeting were read by Secretary N9GHZ. Treasurer's report was given by Treasurer WD9FWP. The Motorola Radius transceiver has been paid for. A \$25.00 donation toward the repeater improvement project was received from KB9AMZ.

Motion by N9FZD, second by W9QHI, to approve reimbursement to N9GHZ for expenses totaling \$21.25 incurred from the purchase of a key for the tower shed, spare fuses for the Radius transceiver, telephone calls to Northway Communications and to the repeater controller, and FAX transmission services to *Badger State Smoke Signals*. Motion carried.

Field Day for 1992 was discussed. N9FZD looked into a site within the Medford city limits and reported on his findings. Both the city park pavilion and the JC ball diamond pavilion were already booked for 1992. The city pavilion was already taken for 1993, but Lee reserved the JC pavilion for the last two weeks of June, 1993. The club will need to cancel one of those weekend reservations when the 1993 Field Day dates have been determined.

Discussion was held on the proposed special event station for July 4th at the Highground near Neillsville. Hours of operation will be 12 noon to 12 midnight local time. It is hoped that a total of 3 HF stations can be set. Help will be needed for setup, takedown, operation of the HF stations, logging, signing certificates for visitors, answering questions from the public, etc. Letters have been sent to the Marshfield, Eau Claire, and La Crosse clubs, inviting them to participate in this project.

Motion by W9LEE, second by N9LHY, to not operate Field Day for 1992 as a club, and to instead put the club's efforts into the Highground July 4th project for 1992. Motion carried.

The Medford VE exam session on April 11th was discussed. N9GHZ contacted WA9W, and the Tomahawk VE testing team will be sending down three examiners. Pre-registrations for exams include N9MEI, N9KPC, KA5NJA, N9NDT, N9MEO, Eric Newman, Roland Sacho, Jerome Lang,

and Nancy and Al Hughes.

Membership in the Wisconsin Association of Repeaters (WAR) was discussed. Motion by N9LHY, seconded by N9LIE, to apply for a one-year membership in WAR for a cost not to exceed \$10.00. Motion carried.

N9GHZ was directed to follow up with a letter on unpaid pledges from the repeater receiver upgrade project.

It was reported there was still no reply from the Wisconsin Public Service Commission in response to the club's letter to them dated 2/3/92, requesting that the club only be charged the residential rate for telephone service provided to the club's autopatch. A letter has not yet been sent to the Citizens' Utility Board. W9LEE suggested having club members, county board members, and the county emergency government coordinator sign the letter to CUB.

Correspondence was read from the Abbotsford Story, Inc. Foundation. They indicated they would not be able to grant our request for funds for our repeater upgrade project due to their limited resources and need to set priorities. No reply has yet been received from the AnnMarie Foundation.

Correspondence was read from the ARRL. They indicated they would not assist us in obtaining a grant from the AnnMarie Foundation.

Discussion was held on non-profit status for the club, moving the meeting location around to different communities, programs for club meetings, a club logo, a club picnic, the N9GHZ-1 packet radio node, and a proposed Amateur Radio license course to be held in the Owen-Withee area.

There was a round of applause for N9LHY for his efforts in publicizing the club-sponsored VE exam session scheduled for April 11th.

N9GHZ reported on the results of the recently-completed Morse code training course at Thorp, WI. It has resulted in three new Novice Class licensees, two from Thorp and one from Gilman.

N9GHZ passed around two articles, one concerning Amateur Radio which appeared in the "Good Morning" section of the 3/7/92 issue of the *Milwaukee Sentinel*, and the other article about Heath Company closing out the kit-building end of its business.

N9GHZ reported on a project he is working on to assist a hearing-impaired senior citizen in Abbotsford who has been having problems with her TV closed-caption decoder for the past four years.

Meeting adjourned at 9:39 p.m.

Respectfully submitted:
Mike Schoenfuss, N9GHZ, Secretary

ABSENT CLUB INFORMATION: No information from the Sheboygan County Amateur Radio Club was received as of the day before printing this issue of BSSS.

The Badger State Smoke Signals Shoppers' Guide

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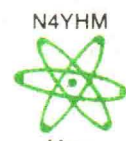
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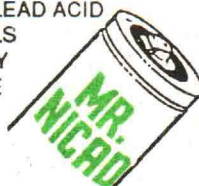
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